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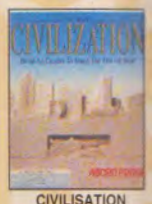
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Overseas orders must be paid by credit card.

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PRINTED IN THE U.K.

ST REVIEW ISSUE 15
JULY 1993

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Tel: 0625 878888 Fax: 0625 850652

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Distribution: COMAG
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Tel: 0858 410510 Fax: 0858 434190

Member of the Audit Bureau of Circulation

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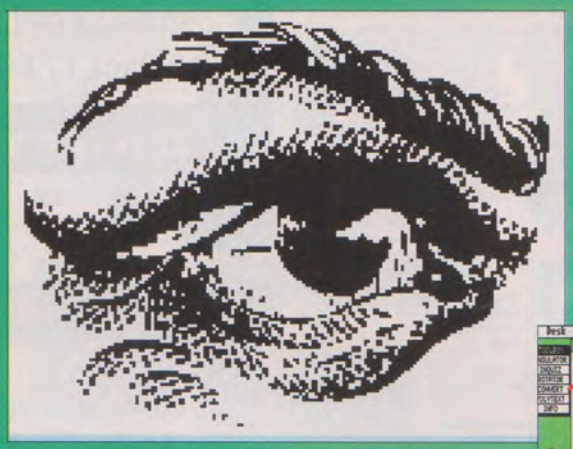
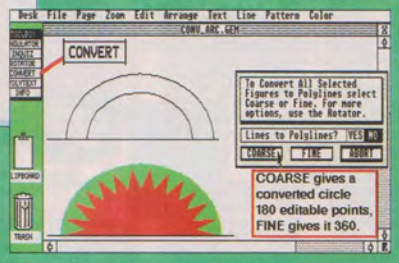
Printed by Passmore International (Maidstone)

COVER ACKNOWLEDGMENTS

Thanks to Marinello Concessionaires Ltd for the Ferrari transparency and to Burgess & Dyson for the drawing board.





(top left and clockwise) Autotracing feature, Imagecopy II review, Easy Tools tutorial and One Man & His ST...

Games are finally starting to appear on the Falcon – Ishar (left) and Transarctica (right). See pages 58 and 59.

ON THIS MONTH'S COVERDISK
EASY TOOLS

... the perfect companion for *Easy Draw 2* from last month! The extra tools include *Angulator* for measuring lengths and angles on-screen, and *Inquizitor* for finding the precise screen position of a number of objects. Also included is *Rotator*, for accurate screen rotation down to one hundredth of a degree and *Convert* which transforms practically any object into a set of lines.
Turn to page 10 to find out more about this superb, exclusive program!

PLUS

SEE PAGE 12 FOR:
FROGGER: An excellent, exclusive game direct from the USA.
CHAMELEON: Desk accessory loader, exclusive to *ST Review*.
GEMBENCH: Exclusive test program for all Atari computers.
SPEED OF LIGHT: A GIF picture viewer that lets you see 256-colour images on a standard ST!

AND

SEE PAGE 26 FOR:
CIXCOMM/READ: Suite of off-line programs for use with our CIX offer on page 9!

FEATURES

14 FLYING ON AUTO
Working with a bitmap picture can be a real pain. One option is to create an outlined version, but how easy is this and can you get good results? Maurice Collins delves into autotracing and examines four ST programs that claim to be able to do the job; *Didot Professional, DA's Vector, Silhouette* and *Convector Professional.*

18 SILVER SENSATION!
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22 GET THE PICTURE!
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How often have you wished that you could afford a printer that takes A3-sized paper? How about a bubblejet at around £400 with just this facility? John Mallinson has his eyes on the new BJ-230...

26 READ BETWEEN THE LINES!
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How do you get two STs to talk to each other? By networking them, of course! Nial Grimes reports on two affordable systems...

39 A STORM IN A PORT!
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NEWS

TECHNOLOGY FAVOURS THE BOLD

Hindsight is supposed to be twenty-twenty vision in that we learn from our mistakes. Looking back eight years to the original launch of the Atari ST, I seem to recall it being presented as the ultimate games machine, a tag that stuck for many years. Those with vision appreciated the latent power inside the beige plastic case, the potency of a 68000 chip as opposed to the range of eight-bit machines of the day. Floppy disk drive, a megabyte of memory, enough ports for a printer, modem and monitor... the list was almost endless.

Over the past eight years, those with foresight have ensured that serious software has appeared for nearly every angle of the market. Word processing, desktop publishing, home accounts, art and design – it is difficult to find an untouched area except for big business. The autotracing article on page 14 highlights a perfect example of software creation with limited appeal, and yet this epitomises a necessary attitude if Atari computers are to continue to filter into every nook and cranny of our everyday life.

In certain areas, the ST has become the computer. Take the example of music. Countless chart hits owe their success to its existence, and even Oscar-winning film scores can be included in the list. But without the total support of software houses, none of this would have happened. The ST would probably have remained firmly in the domain of games players.

Eight years on, we appear to have turned full circle. Yet again we are being presented with a power-house of a computer, this time in the shape of the Falcon. If you've been fortunate enough to try one, you will have been impressed with the sheer speed of the machine and even this is subject to software improvement through products such as NVDI. The difference now is that Atari is no longer the force that they were eight years ago; it appears that they do not have the money to market the Falcon properly as the streamlining of their world-wide operation shows. And yet their armoury includes possibly the most powerful home computer ever developed with many features that are as forward-thinking as those on the original ST. With the open nature of its design, the Falcon is the perfect development product for third-party companies.

In the last few issues, ST Review has looked at the software support in one or two areas. This month we review Falcon versions of Ishar and Transarctica, both of which make use of the Falcon's vastly improved colour and sound. More will follow.

It goes without saying that there is substantially more money in the games arena, and if Atari is strapped for funds we may see the bulk of their marketing being used to promote the Jaguar. But let's not lose sight of the fact that the Falcon is here, and here to stay. The likelihood is that the price will come down and software support will materialise in strength.

Twenty-twenty vision – or should that be déjà vu?

Vic Lennard
Editor

EXCLUSIVE! • EXCLUSIVE! • E

HISOFT BUY MICRODEAL

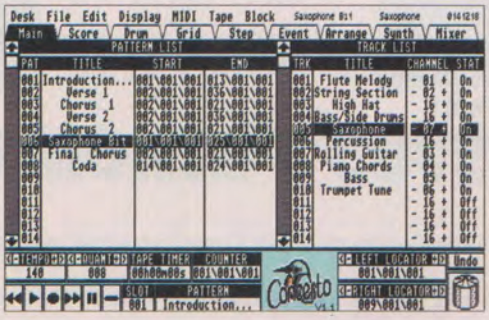
"Buying Microdeal is a natural progression from the acquisition of AVR" – David Link.

Following on from their acquisition of Audio Visual Research (AVR) in April this year, HiSoft have now taken over Microdeal in a bold move to advance their market position.

The purchase of 2-Bit Systems and the AVR trading name brought with it such products as Replay 16 and Videomaster for the ST, both of which were packaged and distributed by Microdeal. Rather than continue such an arrangement, HiSoft decided that it would be better to bring the distribution in house and so have taken over the Microdeal name, packaging and product line. They will also continue to support all current registered users of products such as Stereo Master, Quartet and Concerto.

All Microdeal products will now be produced, marketed and supported from the main offices in Greenfield, Bedfordshire.

David Link, proprietor of HiSoft, commented that this is "a natural progression from the acquisition of 2-Bit Systems. The name 'Microdeal' will continue to be used for all existing products and future titles where appropriate."



Concerto – one of the products recently acquired by HiSoft in their take over of Microdeal.

TUMBLEVANE "CRACK" IT!

Last month, *ST Review*'s Art Round-Up included *Crack Art* and noted that the only manual available was in German.

Following that article, Tumblevane PD library contacted us to say that they had *Crack Art* with English documentation and sent us a copy.

This superb art program was awarded five stars and a Budget Buy Award with the original manual. Could this be the first SIX star program?

Tumblevane are to be found at 6, West Road, Emsworth, Hampshire, PO10 7JT. Tel: 0243 370600. Tell them that *ST Review* sent you!

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Special Reserve have £60,000 worth of prizes to be won over the next 12 months as part of a campaign to win more custom and support their existing club members.

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Some of the prizes you could win...

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JAGUAR ROARS

After months of rumour and innuendo, Atari have finally announced the arrival of the new Jaguar games console.

The new machine, housed in a futuristic casing, is an interactive multimedia system based on an Atari-designed 64-bit RISC processor. It features over 16 million colours in 24-bit true colour and is capable of producing shaded 3-D polygons that can be manipulated in real time. As would be expected, the Jaguar will be able to create spectacular video effects and with a dedicated sound system based on a high-speed Digital Signal Processor, 16-bit stereo CD quality will be on offer.

On the expandability front, the Jaguar will include a 32-bit expansion port for future connection into cable and telephone networks. There will also be a DSP port for modem use and connection to digital audio products.

An optional, double-speed CD player will give a user access to CD audio, graphics and Kodak's new Photo-CD system.

The new cartridges, known as "Megacart", will feature 3-D games such as *Cybermorph*, *Alien vs. Predator* and *Jaguar Formula One Racing* with many more titles in development.

Sam Tramiel, president of Atari – proud to announce the all-American built Jaguar.

"The Atari Jaguar system will revolutionise the state of home entertainment as we see it today, :said Sam Tramiel, president of Atari. "The idea of a 64-bit system is earth shattering and kids and adults will be amazed at both the imagery and manipulative capabilities. And we are proud that our entry into the multimedia entertainment category will be fully made in America."

The Jaguar is expected to sell for $200, including one software game and a "Power Pad" Controller with a ten-key pad. An aggressive advertising, promotion and marketing exercise starts in New York in the Autumn with the rest of the USA targeted for distribution within the year. It is unlikely that the machine will be launched here officially before Christmas 1994.

CUT PRICE CANON

Canon have reduced the price of the BJ-200 desktop Bubble Jet printer from £399 to just £329 (plus VAT).

The printer offers a speed of 173 characters per second in high quality mode and up to three pages per minute in draft mode. Very quiet in operation, it has a resolution of up to 360 dpi.

Marketing Manager at Canon said, "We feel that this is the ideal printer for desktop use, offering high quality at a low price. It appeals to business users and home users alike."

Originally reviewed in February, the price decrease counters the lack of value for money criticism.

For further information, contact Canon on FREEPHONE 0800 252223.

Charts supplied by:

Special Reserve
The Games Club

CHARTS

Microprose dominate the charts this month with four of the first five places. Here's the full list...

POS	LAST WEEK	GAME	PUBLISHER	PRICE
1	NE	CIVILISATION	MICROPROSE	£34.99
2	7	FORMULA ONE GRAND PRIX	MICROPROSE	£34.99
3	NE	SILENT SERVICE 2	MICROPROSE	£34.99
4	1	SECRET OF MONKEY ISLAND	US GOLD	£25.99
5	5	3D GOLF	MICROPROSE	£34.99
6	8	LEMMINGS 2	PSYGNOSIS	£29.99
7	10	ISHAR	SILMARILS	£29.99
8	3	PREMIER MANAGER	GREMLIN	£25.99
9	4	SENSIBLE SOCCER	MINDSCAPE	£25.99
10	NE	KNIGHTS OF THE SKY	MICROPROSE	£34.99
11	6	LEMMINGS	PSYGNOSIS	£25.99
12	2	STREETFIGHTER 2	US GOLD	£27.99
13	NE	SABRE TEAM	KRISALIS	£25.99
14	NE	TRANSARCTICA	SILMARILS	£29.99
15	9	BATTLE OF BRITAIN	US GOLD	£30.99
16	NE	RAILROAD TYCOON	MICROPROSE	£34.99
17	NE	AIR & SEA SUPREMACY	UBISOFT	£30.99
18	NE	SHADOWORLDS	KRISALIS	£25.99
19	NE	INT'L RUGBY CHALLENGE	DOMARK	£25.99
20	NE	ROBOCOP 3	OCEAN	£25.99

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Citizen

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Citizen Swift 90 Colour	**£175.00**

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- Supplied with Silhouette V14. Autotracing vector package (mono monitor only). Scan directly into Silouette via Scanlite or Import IMG, DEGAS, TINY, MacPaint, GEM and SGF bit image files. Exports IMG, GEM (13), SGF, DXF, EPS (Postscript) vector files.

Hand Scanner + Scanlite/Silhouette

£119.99

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520 STE	**£219.00**
1Mb STE	**£229.00**
2Mb STE	**£275.00**
4Mb STE	**£329.00**
1040 STE Curriculum 2	**£289.00**

Falcon 030

- 16MHz 32 bit 68030 Central Processor, 16MHz Blitter, 32MHz 56001 Digital Signal Processor
- 1.44Mb 3.5" Floppy, up to 14Mb RAM. Displays 65536 colours from 262144 palette at 768 x 480 resolution
- 8 Channel 16 bit, higher than CD quality. Stereo sound sampling

FALCON 4Mb 65Mb HD **£959.00**

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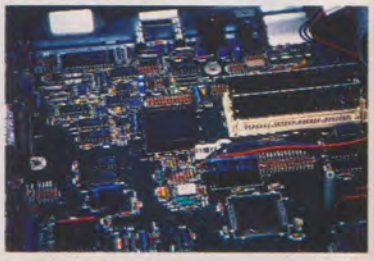
Please note: The minimum charge covers labour, any extra parts are chargeable.



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TOS 2.06 + Switch STE	**£65.00**
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Phone for price and availability of ST spares

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Falcon ST Monitor Adaptor	**£9.99**
Philips SCART to ST/STE	**£9.99**

AMERICAN PIE

First they make me design a bunch of games and now they want me to write a column too...

If you've played any of the exclusive USA games on *ST Review*'s cover disks, then you'll know who I am – Dave Munsie. Based in Texas, I'll try to give you a taste of what it's like to be an ST freak in the USA.

I REALLY want to buy a Falcon, but where is my local dealer? Recently here in the USA, Atari has designed a new dealer requirement for selling Falcons. They MUST have a store front and cannot sell them mail order without prior written permission from Atari, a drastic change for us loyal Atari users over here. Mail order for thousands of Atari users across the nation is the only way to purchase Atari-related products – there just isn't a sufficient number of dealers to fulfil the local supply and demand. And due to the fact that Atari have allowed the distribution of other computers through mail order, a lot of users have come to rely on their favorite mail order house for ALL of their Atari needs. Until now, that is.

Scanning through the national on-line services, there is a fury of discussion regarding users wanting to purchase the new Falcon. When they called their favorite mail order house to place an order for one, they were informed that if they were not a local customer they could not sell to them. They were then told they would have to call Atari directly and try to get them to authorize the mail order purchase.

Being a developer I applaud Atari's efforts. I realize Atari is only trying to develop a stronger dealer relationship but only time will tell if this decision is going to limit the overall exposure of the Falcon to the general public. Speaking of which, the current configurations and pricing for the units here in the USA are: 1MB – $799; 4MB/65MB hard disk – $1299; 14MB/65MB hard disk – $1899.

The ST/STE scene is still happening over here. As a matter of fact, imported UK software still represents a majority of the software released here. The latest and greatest programs to hit our shores are *Civilization*, *Lemmings II*, *Street Fighter II*, *B17 Bomber*, *Speedo GDOS* and *Midi Spy*.

Here's a few of the latest downloads available from our two most popular Atari comms services, GENIE and DELPHI. Ask your local PD/SHAREWARE supplier for these titles:

TUZZLE30.ZIP: Sliding tiles game with DMA sound.
STKW0404.ZIP: Star Trek Klingon battle game.
TERA_132.ZIP: Replacement desktop.
GROCRY30.ZIP: Grocery lister.
XTR22A.LZH: DC Extract. Shareware!
GVIEW224.ZIP: Picture viewer/converter.
ATAX.ZIP: Vertical shoot-em-up.
SPOFLT26.LZH: Speed of light .GIF viewer.

Next month I'll dive into the retail scene and talk to a few store owners and software developers about the future of the ST/STE and Falcon markets here in the States. I'll also take a quick peek into what happened at the Summer Consumer Electronics Show (CES). Till then I bid you a fond farewell. Cheers!

Dave is based in Texas in the good ol' US of A and is responsible for some great GFA BASIC games like Frogger on this month's cover disk. And if he thinks that the Dallas Cowboys are gonna win again next season, he's got another think coming...

NEWS

THE TAKEOVER GAME

Electronics giant Sony has acquired software publishing house Psygnosis.

The move gives the company "a strong foothold in the European games publishing market" and will be headed by the original founders, Jonathan Ellis and Ian Hetherington, who become joint Managing Directors of the new organisation.

Sony has a keen eye on multimedia games technology and have a background in CD, film making and music. Their new product line-up includes *Bram Stoker's Dracula*, *Cliffhanger*, *Sewer Shark*, *Sensible Soccer* and *Last Action Hero*.

Psygnosis will continue to market floppy disk-based products as before, but will also move into the console market later this year.

Jonathan Ellis commented, "This deal gives us the resources of a very large organisation – Columbia TriStar's film business, Sony Music and a comprehensive distribution network across Europe."

More support from Psygnosis now they have big company backing?

F.O.G. ON THE HORIZON!

A new group has formed supporting the Falcon. The Bristol-based Falcon Owners Group (FOG) are offering a quarterly magazine, optional Falcon-specific cover disk, PD and Shareware, regional meetings and even the possibility of a Falcon-only BBS (Bulletin Board Service).

The club's magazine, *Falcon Update* costs £1.50 (£2.25 with disk) and is available now from the address below. It includes full details of club membership (£16.99 for a year and £9.99 for six months).

For further information about the Falcon Owners Group, write to 10 Oak Drive, Portishead, Bristol BS20 8QS or call 0275 843241 during office hours.

REGISTERING WITH CIX – FREE!

As an ST Review reader, you can register with CIX for free until the end of July, saving £25 plus VAT!

Last month, we gave you the opportunity to register with CIX, the Compulink Information eXchange for free. We're repeating that again this issue!

Use any comms program to dial CIX on 081-390 1255 and establish a connection. The system will prompt you to type "cix" to login, and then ask for your nickname. All users have their own unique on-line name, which can either be a short form of their own name, or a humorous nickname. Since you don't yet have a nickname, type "new" and CIX will ask for your details, and for a unique password which will prevent anyone else from hacking into your account. The registration process will take about ten minutes. You'll need to have your credit card details available, since CIX must know to whom it should charge the account before it allows you access to the system. If you don't have a credit card, ask someone who does if you can pay them to use their card.

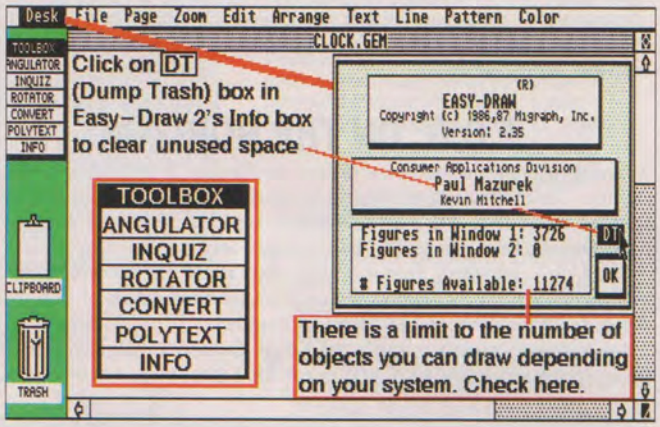
After the system has accepted your name, address and payment details, you will be asked if you wish to enter a special code. Answer "yes", and type in our free code word **streview**. You'll be given one final chance to read CIX's terms and conditions, and if you're completely happy with the details you've entered, you will now become a registered user of CIX.

Now go and read the article on the CIXComm/read suite of off-line programs on page 26!

Easy Tools – the perfect partner for last month's Easy Draw 2. Keith Berry gives you the lowdown...

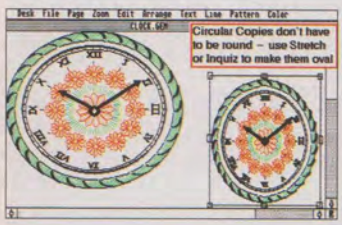
TOOLS OF

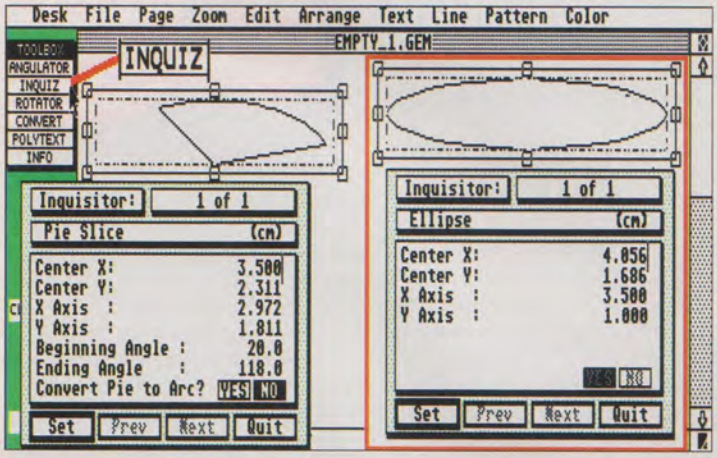
The **Information Box** is displayed from the Desk menu. Converting objects to Polylines increases their figure count so it's advisable to check how many you have left. Unless you really need to, avoid converting Lines to Polylines as this trebles their figure count. The **Toolbox** (shown here enlarged for clarity) may be moved by clicking on its top line but if moved into a window it tends to disappear beneath drawings and has to be recovered by selecting *Easy Tools* from the Desktop Accessories.



The **Angulator** is an on-screen ruler/protractor for measuring the length and angle of an existing object. Either mouse button exits, at which point you will be presented with the choice of Save, which stores the values for the next time you use the Angulator (or the Rotator), Forget (Quit the Angulator), or Continue measuring.

Use the keypad keys as shown to operate the Angulator. The measurement displayed is the space between the markers. Note that throughout *Easy Tools*, clockwise rotations return negative angle values and anticlockwise ones positive values.



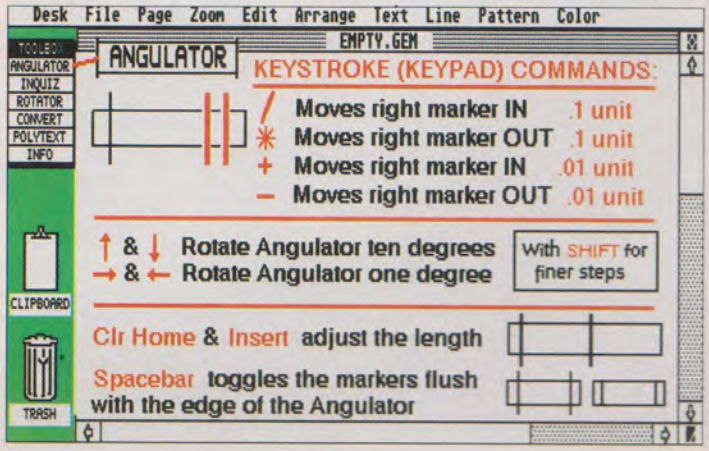


Inquiz (the Inquisitor) shows the location, size of selected object(s) along with other information – you can rubber-band several objects and move between them by using the Next and Prev boxes. The data shown can be edited directly and the object is then redrawn to the new specifications after clicking on Set. There is an option to convert a Pie Slice to an Arc but not vice versa. As with most of the *Easy Tools* menu boxes, if it obscures the drawing, just click on the title at the top of the box to move it to the other side of the screen.

When a rectangle is used with Inquiz you can click on YES to Make a grid. Either select the number of rows/columns required and click on Calc to view the sizes they will be, or click on the lower arrow to enter the sizes directly. If the rectangle is too small to accommodate your requirements you will be offered the option of the rectangle being redrawn to fit them. Two or more such grids can be overlapped for tartan-like effects – toggle Transparent on from the Pattern menu.

With exception of the hands, all of this clock was created using the **Rotator**. The Roman numerals were Polytext objects located one at a time in the "XII" position and each rotated into its correct position, the "XII" itself being entered last. After a little experimentation with the Rotator you will easily be able work out how the rest was done. Hint – the Arrange menu's Centre and Middle played a vital part!

The **Convert** tool transforms any selected but ungrouped objects, other than a text object, to a Polyline. Such conversion is essential for rotating (the Rotator has its own convert function) but it also adds considerable versatility to drawing. A circle, for example, that is currently a Polyline can be edited as a Polyline of either 180 or 360 movable points, whereas a normal circle object can only be edited by moving or resizing it. This illustration is a simple example: two pairs of mirrored Pie Slices before and after conversion, editing and applying pattern and colour and,the editing to produce the sunburst took just a few minutes.



IF YOU MISSED EASY DRAW 2 LAST MONTH...

... on our cover disk, you can still get it from our back issues department! At a cost of £4.50, including postage and packing, you can get this superb commercial Migraph graphics package worth £80!

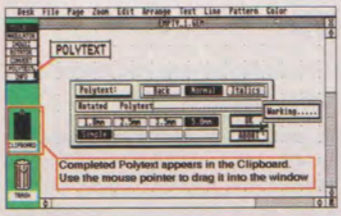
Just send a cheque or postal order to:
***Atari ST Review* Back Issues,**
Europress Enterprise,
Europa House,
Adlington Park,
Macclesfield SK10 4NP.
Tel: 0625 878888

THE TRADE...

The standard Text functions of *Easy Draw 2* can still be used for plain text additions to drawings, but such GDOS-reliant text can neither be converted nor rotated. When you need such manipulated text lines you can select the **Polytext** tool, which provides a dialogue box into which you can enter your text message to a maximum of 40 characters at a time and select its size and slope direction. Click on OK and the text is generated.

If the Clipboard is empty, your Polytext will appear in there waiting for you to drag it out onto the window. If the Clipboard already contains something, the text will appear at the top left corner of the active window. Unlike standard text, you can use Stretch or Size boxes to make it bigger. Selecting the Rotator enables you to tilt it to any angle or to Circular Copy it.

Some interesting effects can be achieved with manipulated text. Only one typeface is supplied though the source code of a font creator is supplied on the disk for anyone well acquainted with the "C" language and prepared to spend the necessary time...

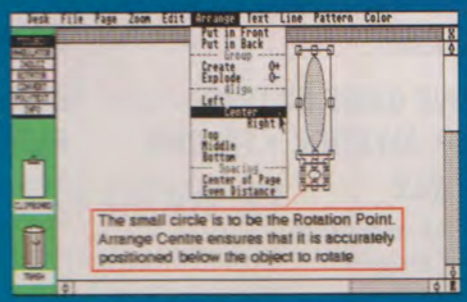


PROBLEMS WITH EASY TOOLS AND SUPERBOOT

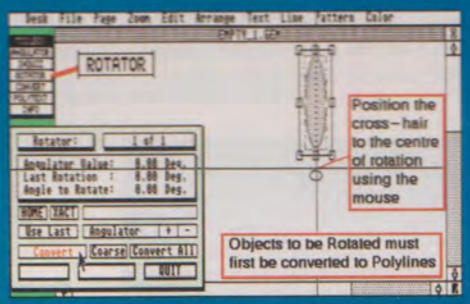
Hard drive owners who use *Superboot* may experience problems when running *Easy Tools* with *Easy Draw 2* – the program not responding to commands, and so on.

The solution is to use *Superboot* to load *GDOS.PRG*, select the *ASSIGN.SYS* file and the *Easy Tools* Accessory but NOT run *Easy Draw 2* itself. For the Gemstart program select "None," re-boot and let *Superboot* drop back to the Desktop, from where you can now run *Easy Draw 2* without further problems – we hope! The same may apply to other menu loading utilities...

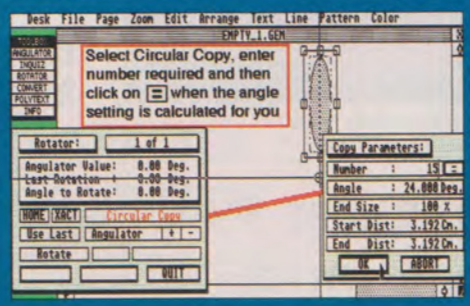
STEP BY STEP



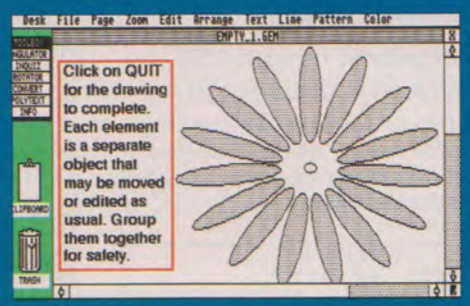
The Rotator can either rotate an object a number of degrees (in hundredths of a degree if necessary) or, better still, can make one or many rotated copies of itself. We begin here with a single filled ellipse placed above a small circle, which provides a reference for the point of rotation. A Polyline would have been better than an ellipse here but we need to show the Convert box in the sequence.



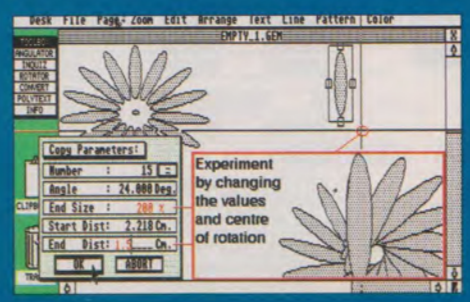
Click on the Rotator in the Easy Tools Toolbox. Before any object can be rotated it must be converted to a Polyline – the Convert function in the Rotator can transform a group of objects. Move the junction of the cross-hairs to the centre of the small circle and click on HOME to centre the cross-hairs. XACT displays a dialogue box into which you may enter the rotation point's coordinates. Coarse is suitable for most purposes unless you have a large Arc or Circle for which you need Fine. Once converted, you cannot change back.



Click on Circular Copy and another dialogue box appears into which enter the number of copies required – 15 in this case. Clicking on the "=" box shows that 24 degree rotations will be made. If you haven't yet set the rotation centre, you will have to ABORT back to the Rotator menu, otherwise click on OK and then QUIT at the appearance of the next dialogue box.



The rotated elements will appear, each marked as active. At this point you can either press the keyboard's Delete key to erase them all and start again, or press Alt + to group them all. You can produce other copies with the Rotator in various different ways – by setting the Angle to 0, different Start and End Distances, larger or smaller End Size and so on. The way to obtain the most benefit, and pleasure, from both Easy Draw 2 and Easy Tools is to experiment.



By changing just some of these parameters, this has produced a spiral of ellipses of increasing size. You can create far more spectacular spirals by greatly increasing the Number of copies without clicking on "=" so that the object is rotated by more than one full circle. It is always better to rotate a copy as if the original is tilted more than once-distortions creep in and you will probably be unable to recover it in its original form.

A whole host of great programs for you this month, including a new version of an arcade classic...

ALSO ON THIS MONTH'S DISK...

EASY TOOLS

ACCESSORY • EXCLUSIVELY FOR USE WITH EASY DRAW 2

Loading instructions for the add-on accessory to Easy Draw 2.

Easy Tools is an extra set of tools for the *Easy Draw 2* program. It only works from within *Easy Draw 2*, so if you missed last month's magazine, contact our back issues department now.

Make a backup of your *Easy Draw 2* disk using *STRBAKUP.PRG* below. Delete the *OTHER_PR.OGS* folder and copy the *EZ_TOOLS* folder and *EZD_ACC1.ACC* program from this month's cover disk to the root directory. It will then be loaded whenever you start the computer with this disk. Do NOT copy the file *CREATEFNT.C* – see the text on page 10 for more information.

GEMBENCH

EXCLUSIVE UTILITY BY OFIR GAL • MED/HI RES • FALCON-COMPATIBLE

Check your ST's performance with this exclusive benchmark program.

GEM Bench will put your computer through 14 different tests and compare it with other TOS versions.

On running, the configuration of your machine should appear automatically. Click on each individual test or on Test All for a full report. You can save or print out your results.

WHAT TO DO IF YOU HAVE PROBLEMS WITH YOUR COVER DISKS

DON'T PANIC

In the unlikely event that your cover disk won't load or gives you any other problems at all, remove any cartridges and peripherals and try again. Please note that to restart the computer, you must SWITCH IT OFF for at least five to 10 seconds to clear all traces of resident programs before continuing.

If this doesn't solve your problem, return your disk, with a stamped addressed envelope to **P.C. Wise Ltd., Dowlais Top Business Park, Dowlais, Merthyr Tydfil, Mid Glamorgan, CF48 2YY.**

PC Wise will test the disk and send a replacement as soon as possible. You can contact the PC Wise Helpline with any urgent problems. Please note that they will deal with faulty disks only and not general enquiries. PC Wise can be contacted by telephone on 0685 350505 between 10.30 and 12.30 on weekdays.

FROGGER

EXCLUSIVE GAME BY DAVE MUNSIE • JOYSTICK • FALCON-COMPATIBLE

Are you old enough to remember Frogger?

This superb version of the classic 8-bit game runs on any ST with a colour monitor. Guide the frogs across the road, avoid the traffic, and hop onto logs, turtles and even crocodiles to get across the river.

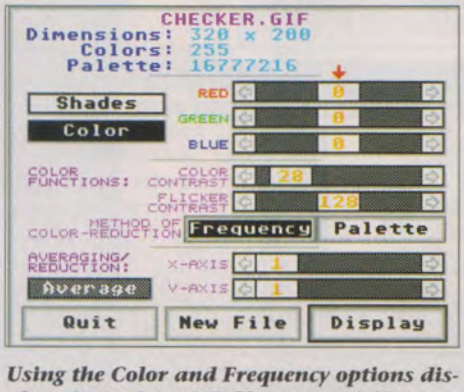
Classic arcade action from Dave Munsie in the USA.

SPEED OF LIGHT

ART UTILITY • LOW RES • FALCON-COMPATIBLE

GIF files displayed in up to 256 colours, even on a standard ST!

Speed Of Light is a GIF file viewer with the ability to display up to 256 colours, even on a standard ST. Run the program in low resolution and have a look at the GIF files provided on the disk...



Using the Color and Frequency options displays 256-colour GIF files very quickly.

CHAMELEON

DESK ACCESSORY • ANY RESOLUTION

The desk accessory that can't make up its mind!

Copy *CHMELEON.ACC* to the root directory of your boot drive and restart the computer. You'll now find a new accessory called *The Chameleon1* in the Desk menu. Click on this and the file selector will appear. Find the accessory you require and click on OK. The new accessory will load and appear but with an arrow to the left of it.

To remove or change the current accessory, select it whilst holding the Shift and Alternate keys to return to *Chameleon*. Up to six copies of the program can be resident by changing the program name slightly (*CHMELEO2.ACC*, for example).

CIXCOMM

COMMS UTILITY • MEDIUM RESOLUTION

Full program details are on page 26, but follow this first...

WARNING! Do not try to run this program from the cover disk.

The file *CIXCOMM.TOS* is a self-extracting archive file. Format a double-sided floppy disk and copy the file to it. Double click on it and all the files you need will be extracted. Then delete the original file and you are ready to go. It is suggested that you register on CIX manually before you use the Off-Line Reader.

STRBAKUP

COVER DISK BACKUP UTILITY • ANY RESOLUTION

A simple backup utility for your cover disk.

This month's cover disk is formatted to 800 kilobytes to allow us to squeeze some extra goodies on it. Unfortunately, this means that you can't back it up using the usual desktop method.

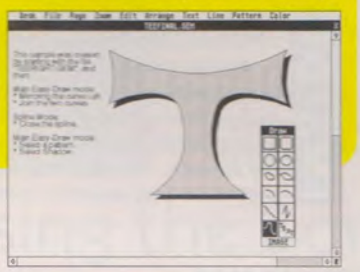
STRBAKUP will copy this cover disk to a blank one. It formats the destination disk as well, so be careful which disk you use! Make sure you write protect your original and follow the on-screen instructions. This program is intended for the back-up of the cover disk only – it is not recommended for any other purpose.

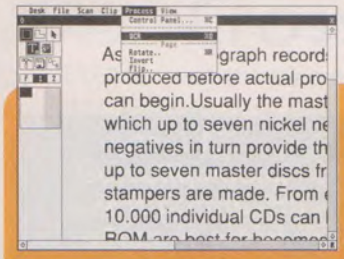
MIGRAPH UPGRADE OFFERS!

Our cover disk this month features Easy Tools 2, the companion to last month's Easy Draw 2. Here we give you the chance to make the most of these two exceptional programs by buying the full manuals, or even upgrading to Version 3, the very latest version available. We also bring you other products from Migraph, one of the most famous ST software houses in the USA!

WHAT'S EXTRA IN EASY DRAW 3?

Easy Draw 3 is the very latest version of Migraph's excellent product, covering creation and editing of Bezier curves and splines, tracing of bitmap images and conversion of any object (except for text, bit-images and polylines) into Bezier curves. With this added capability you have the power tools to produce professional results with every project.





OCR – OPTICAL CHARACTER RECOGNITION

A powerful, intelligent, full-featured text reading application. Convert scanned text to an ASCII text file which can then be loaded into a word processor or DTP program.

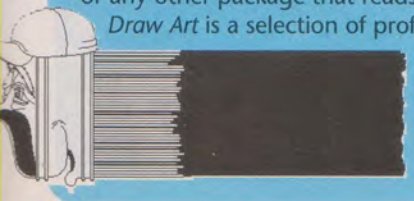
Pretrained on many different typefaces including Bookman, Caroll Pica, Courier, Courier Italic, Delegate, Elite Modern, Helvetica, Pica, Prestige Elite and Times. If the typeface of your text is not predefined then it's easy to teach any new style to Migraph OCR.

OCR Junior is for direct scanning using the Golden Image hand scanner. *OCR Senior* allows you to load TIFF, IMG and IFF images as well as direct scanning.

SCAN ART AND DRAW ART

Scan Art contains a set of specially scanned, hand edited .IMG files for use in *Easy Draw 2*, or any other package that reads .IMG files.

Draw Art is a selection of professionally drawn vector graphics in .GEM format ideal for loading straight into *Easy Draw 2*.



TO: *ST REVIEW* READERS OFFERS. PLEASE RUSH ME THE FOLLOWING ITEM(S): (TICK AS APPROPRIATE)

- ❑ Easy Draw 2 manual £12.99
- ❑ Easy Tools 2 manual £9.99
- ❑ Easy Draw 3 upgrade £29.99
- ❑ Easy Tools 3 upgrade (Required to use Easy Tools with Easy Draw 3) £9.99
- ❑ Touch Up £34.99
- ❑ OCR Junior £39.99
- ❑ OCR Senior £49.99
- ❑ Package – Easy Draw 3, OCR Junior and Touch-Up £79.99
- ❑ Package – as above but with OCR Senior £84.99
- ❑ Draw Art £13.99
- ❑ Scan Art £12.99
- ❑ Package – Scan Art and Draw Art £19.99

PRINTER DRIVERS

- ❑ Epson 9 pin printer driver £9.99
- ❑ JX-80 printer driver (B&W and Colour) £4.99
- ❑ Okidata 9 pin printer driver (B&W and Colour) £4.99
- ❑ C'-ITOH Prowriter 136x144 printer driver £4.99
- ❑ Canon PJ1080A colour printer driver £4.99
- ❑ Fujitsu 24 pin 180 dpi printer driver £9.99
- ❑ Epson LQ 24 pin printer driver £9.99
- ❑ Canon BJ10e printer driver £12.99
- ❑ Toshiba 24 pin printer driver £9.99
- ❑ NEC 360dpi printer driver £9.99
- ❑ HP Laserjet laser printer driver £14.99
- ❑ HP Deskjet driver £12.99
- ❑ Houston/Roland/HP Plotter drivers ..... CALL

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EXPIRY DATE: ___/___ SIGNATURE: .....

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IMPORTANT!

Paying by CHEQUE or POSTAL ORDER.
Make cheques and POs payable to GO DIRECT and put your cheque card guarantee number on the back.
All prices are inclusive of post & packing and VAT.
Goods are guaranteed for 12 months.
Please allow up to 28 days for delivery.

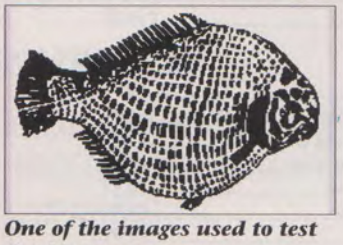
Send your order to: ST REVIEW READERS OFFERS, 7 VINEGAR HILL, ALCONBURY WESTON, HUNTINGDON PE17 5JA

FLYING ON AUTO

Does autotracing work? Maurice Collins puts some ST autotracers to the ultimate test...

Autotracing, also known as vectorisation, is the process of converting images from bitmap to vector format by tracing an outline of each filled area in the image and turning each area into a single vector object. The objects are then grouped together to form a complete vector graphic.

It first came to the ST in the shape of *Avant Vector* and the likes of *Didot Lineart* and *Didot Professional* soon followed suit. Happily, it is a feature that can now be found in the budget package, *Silhouette* and the recently released *Convector*. It is an extremely useful facility if you're into DTP and graphics. The advantages of autotracing should be obvious to anyone who has tried to use a bitmap image in a DTP program. Scaling down isn't usually a problem but scaling up creates jagged edges caused by so-called "aliasing" of the curves and lines. Vector images can be scaled up or down to fit the slot on your page and rotated or slanted without any loss of clarity.



One of the images used to test the four programs.

Bitmap images also use up a lot more disk space than vector ones on the whole. In fact, many simple bits of line art can take up a tenth of the space when vectorised. It isn't always true, though, and sometimes a complex image will use up more space in vector format. Autotracing works well with images that have varied line weights and filled areas. For the review, we've taken a cross-section of image types and traced them using the four main contenders.

Four images were used, all of varying size and complexity. The most detailed is the fossil fish, followed by the eye which contains a lot of stray pixels, the butterfly which has enclosed unfilled areas and the rose, a large but very simple graphic with smooth lines of the same width. For each image, we timed the process and scored each package on speed and quality of the result.

FROM BITMAP TO VECTOR

INSIDE INFO

Bitmap images are literally pixel "maps" – each image is made up of hundreds or thousands of individual dots "mapped" out on the page. They are also resolution dependent – low resolution images blown up to a larger size look very blocky. Bitmap images are produced by paint type programs using tools like spraycans and user-defined brushes. The most common ST formats are Degas (a *.PI? or *.PC? extender depending on screen resolution) and IMG.

Vector graphics, on the other hand, are made up of lots of instructions for constructing the lines and shapes. This makes them resolution independent – printed out on a high resolution device like a 600 dpi laser they look incredibly smooth. The ST's native vector format is GEM as supported on last month's cover disk program, *EZ Draw 2*.

DIDOT PROFESSIONAL

Didot Professional is currently being bundled with *Retouche Professional* at a price that makes it extremely attractive for a combined DTP system.

For your money you get a highly sophisticated page design program with an iconic interface and powerful built-in vector graphics capabilities and outline font handling. It can use PostScript or Calamus typefaces, which it converts to its own proprietary format, and has its own font editor too. Text and graphics can be freely rotated and text can even be run along vector paths or circles, given tints and colours or converted to graphics and manipulated in almost any way imaginable. It can also output PostScript files but only a handful of printers are directly supported.

Didot comes in both monochrome and colour versions, although both share the same autotracing module that functions as an integral part of the program. The only disappointments for professional users are the limited import/export formats and the lack of support for greyscale or colour images. Images in IMG or Degas high resolution format can be placed on *Didot*'s pasteboard-style workspace. The area to be traced is then marked using a rectangular marking tool and the settings chosen from the main menu.

Three options are offered with five levels of accuracy. The first choice is to faithfully trace the image pixel by pixel using only lines. There is little value to this approach as the quality of the resulting image is little better than the original. The second option extrapolates the shape of the object, but only using lines, while the third and most effective uses Bezier curves for an accurate representation. The autotrace module is limited to single objects containing 12,000 segments but even the intricate fossil image only came to 6,400.

Part of the autotraced vector object is broken down into its constituent Bezier curves with the original bitmap in grey.

Results from *Didot Professional*'s tracer are excellent. It works well with a wide range of images despite the relatively few user-definable parameters.

Although it failed to interpret the broken lines in the butterfly image correctly and was less effective than it could have been with the rose, it produced the best overall results of all the packages on test.

PROS AND CONS

Fast and easy to use
Good results on most types of image

Expensive unless you need all the the features
Limited import/export

"A fast uncomplicated integrated tracer helps to make Didot Professional the best ST DTP package yet"

NAME: DIDOT PROFESSIONAL
COMPANY: CGS
CONTACT: 081-686 8121
PRICE: £299 WITH RETOUCHE PROFESSIONAL
MIN MEMORY: 2 MB
SYSTEM: ST/STE/TT/FALCON

EASE OF USE	✪✪✪✪✪
DOCUMENTATION	✪✪✪✪✪
EFFECTIVENESS	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪

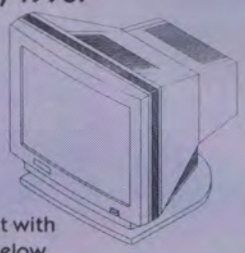
OVERALL 87%

System Solutions

High Res Monitors

The sudden lack of Atari High Resolution monitors, and high demand have prompted System Solutions to fill the gap with their new range of SM14 monitors.
This 14" monitor has a paperwhite FST (flatter squarer tube), which gives a crisp and sharp image with no blurring at the edges. There are two models, the SM14 without speaker, and the SM14s with Speaker. A special Falcon version is available.
The Monitor has only 1/2" boarder, which gives the biggest picture on any 14" monitor, perfectly centered. It has dynamic focussing, and a tilt and swivel base. It is a totally plug in and go unit.

'Essential Buy, 90%'
ST Review, May 1993.



RRP:£149.95
without audio
RRP:£169.95
with audio

Special Price
when bought with OverScan ST. See Below

New Version Falcon compatible

NVDI

If you are one of those people who use DeskTop Publishers, or Music Notation, do you find that you spend ages for the screen to redraw? NVDI is the fastest and most compatible software display accelerator available.
It works by replacing parts of TOS with optimised code. The faster the processor (CPU), the greater the benefit. Display routines are 3-10 times faster.
The New Version 2.5x is even faster, and is Falcon compatible.

Version 2.5x - £49.95

New Price

High Density

Would you like to have 1.44Mb on one floppy, well now you can with the Elco High Density kit. Features include:

- ★ Support for up to three drives!
- ★ Hardware and software sensing!
- ★ Software is included. (ACC and CPX)
- ★ Supported by TOS 2.06
- ★ New 1.44Mb Floppy drive
- ★ The first and still the best!

A perfect replacement for those single or double sided drives.

Special Offer Price: £79.95
The High Density Module is also available seperately without the drive for £39.95

News

Hard Drives

QUALITY SCSI Hard Drives are available with anything from 40 Megabytes to 2 Gigabytes!! They are all carefully assembled into beautiful UK made cases, and available from as low as £299

Special Offer:
120mb SCSI Drive complete with ICD Link - £459.95 inc.

Falcon Hard Drive,
Ideal for hard-disk recording,
120Mb - £399.00, 1Gb - £1495.00
Ask for a quote

Falcon Tower

Custom made in Germany, the Falcon Tower System is now available, the price includes a keyboard kit - £249.95

Exciting NEWS

Extra High Density Drive

Now available - 2.8Mb floppys, compatible with big blue. Reads and writes 720k and 1.44Mb floppies.
Ask for an information sheet

Black Water BBS

Our new BBS is now up and running, Features include: a helpline, Special Offers, Press Releases, Product Information, file and message base.
*** 14,400, MNP5, 8N1 ***
Give it a call on 081-229 3133

For further information on any of the products on this page, please contact:

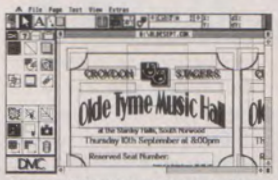
System Solutions,
Windsor Business Centre,
Vansittart Road, Windsor, SL4 1SE
Tel: 0753-832212
Fax: 0753-830344
or
17-19 Blackwater Street,
London, SE22 8RS
Tel: 081-693 3355
Fax: 081-693 6936

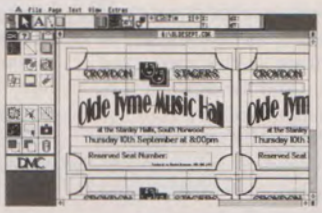
Crossing the Border

EVER fancied the idea of a larger monitor, but not the price that goes with it?? Well now you can, with OverScan ST. This little board fits inside your Atari ST(FM) or Mega ST (not STe's) allowing you use the black borders as an extended working area. In practise this means that you will get up to 40% extra screen in high resolution, and up to 60% in colour.

Special Offer Price £39.95

Extra Special
SM14 Monitor and OverScan - £169.95
SM14, + OverScan Fitted - £199.95





Above: Without OverScan installed
Right: OverScan in action

Summer Madness for August + September

Free fitting on all upgrades supplied with computers that are sent in for repair. Ask for the Upgrade Offer Price List. It covers Memory Upgrades, Floppy Drives, High Density Floppy Drives, TOS 2.06 Operating Systems, PC Emulators, Accelerators, Key Clicks, OverScan ST and more. ONLY £10 courier collection and delivery!! Phone now for your personal quote.

Windsor Service Centre:
Windsor Business Centre, Vansittart Estate, Windsor, SL4 1SE. Tel:0753-832212
London Service Centre:
The Desktop Centre, 17-19 Blackwater Street, East Dulwich, SE22 8RS. Tel:081-693 1919

ATARI WORKSHOP

DA'S VECTOR

DA's Vector was developed by the same programming team that produced *Didot Professional* so some similarities might be expected. Most of the icons are the same though *DA's Vector* doesn't have the five levels of accuracy that *Didot* has. Nor does it have any way at all of tidying up an imported bitmap image.

On the plus side, *DA's Vector* can import files in rather more formats than *Didot*, using the add-on conversion module.

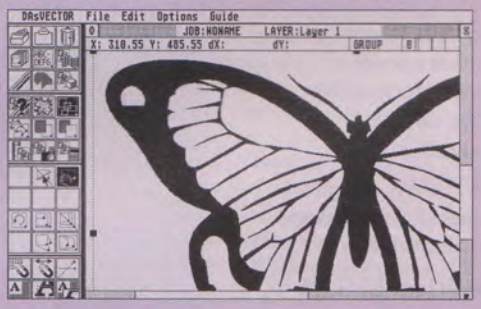
Although the program will only trace files in the rather incompatible TIFF format used by both *Didot* and *DA's Vector*, files in IMG, Degas, STAD, Targa, Calamus Raster (CRG) or TIFF format can be imported. *DA's Vector* is an all-round vector graphics package with some wonderful animation features and outline font handling just like *Didot Professional*. It doesn't have the latter's DTP capabilities but it can import and use colour image files as fills and backgrounds. It has its own charting facilities and can extrude vector objects such as text and autotraced images to create superb 3D effects.

The program only offers one level of accuracy when using Bezier curves (the other two modes, line and adjusted line, as in *Didot*, are much less useful). However the results are surprisingly good and compare well with *Didot* and *Convector* on less complex images.

In fact on certain types of image it proved much better than either, particularly the butterfly with very fine lines across the wings ending up as dots in both *Convector* and *Didot* but as smooth lines in *DA's Vector*.

It can even trace greyscale and colour images but some detail has to be discarded and it the need some editing afterwards. To decide what to trace and what to leave out, a threshold option is available. It lets you specify, as a number between 0 and 255, the grey level below which a pixel is converted to black. As you increase the threshold, fewer areas become available for tracing so it is very often a process of trial and error.

DA's Vector is very easy to use, once the basics have been mastered and the price and power make it an extremely attractive buy for those needing to add autotracing facilities to their DTP armoury.



DA's vector produced the best results from the butterfly image.

Fast and easy to use
Vector graphics creation and editing too

PROS AND CONS

Too few parameters for more difficult images
Clumsy import/export

"Autotracing as it should be – dead simple with no fiddly settings and good results every time"

NAME: DA'S VECTOR
COMPANY: CGS
CONTACT: 081-686 8121
PRICE: £149
MIN MEMORY: 2 MB+
SYSTEM : ST/STE/TT/FALCON

EASE OF USE ●●●●●
DOCUMENTATION ●●●●○
EFFECTIVENESS ●●●●○
VALUE FOR MONEY ●●●●○

OVERALL 84%

SILHOUETTE

Silhouette offers both bitmap art and vector drawing features together with an autotracing facility with several user-definable parameters. Graphics are created, edited or imported in one of two windows, raster (bitmap) or vector, though detailed work can be carried out in the pixel editing mode which is effectively a single level of close-up magnification.

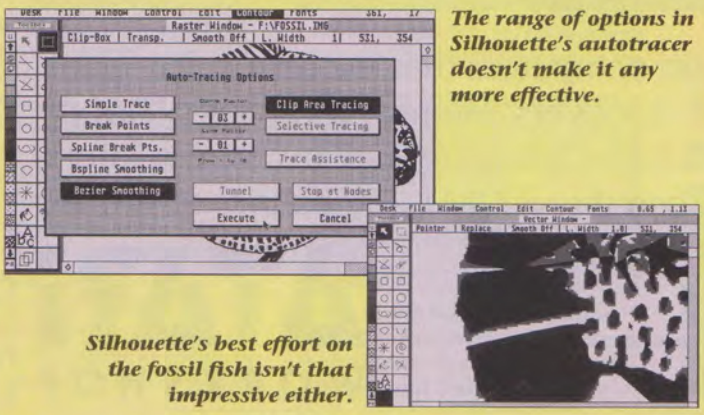
Silhouette is primarily a graphics package with added features and is the only package reviewed here with a full suite of bitmap editing tools for tidying up scanned images before tracing them into vector format. Using a combination of the eraser and pixel editing modes, any scanned or imported images can be adjusted and smoothed by hand although there are no automatic cleanup tools such as those provided by programs like *Convector*.

In point of fact, the wide range of useful tools, and the more exotic ones like the spiral and star, make it quite feasible to produce an artistic graphic in bitmap mode and then trace it. The main problem with the bitmap editing is the restricted magnification and the lack of a real, usable block function.

Silhouette is not the easiest program to use as some of the menus are awkwardly laid out and several features that one would expect to be able to get at quickly are quite hard to find. However, it has some powerful functions and the fact that bitmap shapes and lines can be moved around after they're drawn makes for quite precise illustrations.

Tracing an image requires loading it into the raster window in either IMG, Degas, Tiny or MacPaint format (a TIFF import module is apparently still under development). The clip area tool is then used to define the area to be traced and the parameters set from the resulting dialogue box.

The autotrace module is certainly very fast but it can only really be recommended for simple graphics without unfilled areas inside, such as shapes and scanned characters. Too many curves leads to very inaccurate tracing and re-entrant curves can cause problems too. Although it would happily trace the test files, it was unable to differentiate between filled and unfilled areas, making reconstruction a hard task. Basically the traced graphic has to be taken apart and each object filled manually, detracting considerably from the usefulness of the package.



The range of options in Silhouette's autotracer doesn't make it any more effective.

Silhouette's best effort on the fossil fish isn't that impressive either.

Combined bitmap and vector tools
Budget price

PROS AND CONS

Only suitable for outlines and text
Poor magnification

"A good buy for the occasional user but too restricted for most DTP work"

NAME: SILHOUETTE
COMPANY: LADBROKE COMPUTING
CONTACT: 0772 203116
PRICE: £60
MIN MEMORY: 1MB
SYSTEM: ST/STE/TT

EASE OF USE ●●●○○
DOCUMENTATION ●●●●○
EFFECTIVENESS ●●○○○
VALUE FOR MONEY ●●●○○

OVERALL 62%

CONVECTOR PROFESSIONAL

I've kept *Convector* until last for two reasons. Firstly it's the newest package, having only just arrived in the UK, and secondly it's the only dedicated autotracer on the ST. For this reason it ought to be the best – unlike the other three you're paying entirely for autotracing facilities and there are no extras like vector graphics, bitmap editing, animation or page layout.

Loading *Convector* produces a screen somewhat reminiscent of the Kuma products or *First Word Plus* – ten function key icons along the bottom, moveable icons on the Desktop and drop-down menus into the bargain.

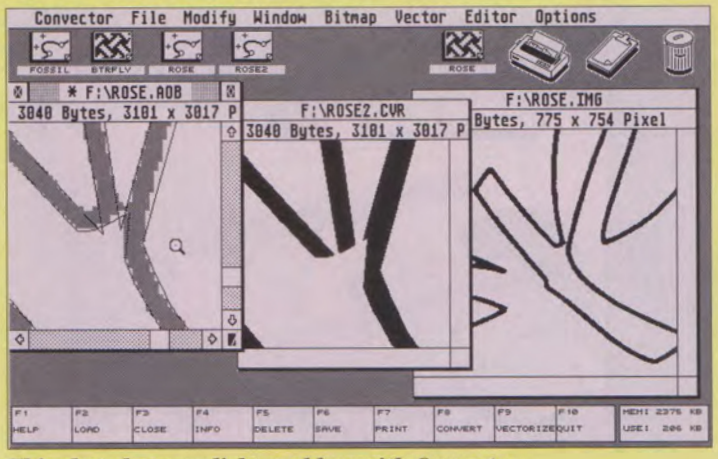
Graphics can be imported in 14 different formats, including TIFF, IMG, Degas and IFF files, and as many loaded at once as memory allows, up to a maximum of sixteen. Loaded images (and their resulting vector files) can be iconised on the Desktop to make life easier and there are plenty of keyboard shortcuts to make it very easy to use.

Only monochrome images can be imported at present but there are plans to release a version that supports greyscale and colour images. Images can be inverted, contoured and clipped before being vectorised and stray pixels can be removed automatically, though it would have been a good idea to include simple bitmap editing tools such as an eraser.

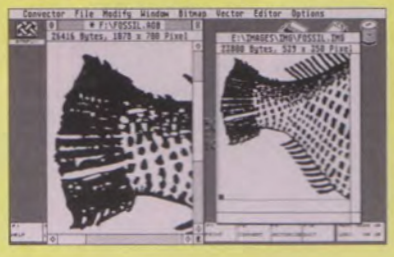
Although polygons and lines can be used to trace very angular images or simply trace images quickly, most users will be going for Bezier curves to provide the finest possible accuracy. The process is quite complicated and there are several parameters to be specified. The program draws the contours of the graphic in memory first, and divides this into separate objects which are then traced one at a time, lines being turned into curves once placed correctly. It is a novel approach and works well on most images although it refused to interpret one part of the rose image correctly, as can be seen from the screenshot, preferring to see the shape as a three-way junction rather than two almost touching curves.

The polygons and Beziers can be set coarse or fine using the slider bars in the main parameters dialogue and corners can be corrected or not, as desired. A coarse precision setting means that the trace might not follow the image closely while a fine setting will ensure a much better fit, though it will take much longer.

Although *Convector* has no vector graphics editing features, there are several facilities for finishing off. Graphics composed of a number of smaller objects or paths can be joined together to form a whole, or broken apart and deleted. Vector graphics can be saved in seven formats: Arabesque, GEM, GEM/3, CVG, EPS and Megapaint Pro–fessional. All in all, while slower than the others, *Convector* is the best choice for the serious user, both in quality and output flexibility.



This shot shows a slight problem with Convector failing to interpret two mclose curves correctly.



Convector's interface is quick and easy to learn. Here the fossil fish has been very finely traced.

Multiple windows and open files
Good range of import/export features

PROS AND CONS

No other features for your money
Occasional hiccups in interpretation

"The wide range of options makes Convector the best option for professional users"

NAME: CONVECTOR PROFESSIONAL
COMPANY: HISOFT
CONTACT: 0525 718181
PRICE: £129
MIN MEMORY: 1 MB
SYSTEM: ST/STE/TT

EASE OF USE ✪✪✪✪✪
DOCUMENTATION ✪✪✪✪✪
EFFECTIVENESS ✪✪✪✪✪
VALUE FOR MONEY ✪✪✪✪✪

OVERALL 89%

THE AUTOTRACING BUYER'S GUIDE

Package	*Convector*	*DA's Vector*	*Didot*	*Silhouette*
Resolution	Medium/High	High	High	High
Import IMG	y	y	y	y
Import Degas	y	y	y	y
Import TIFF	y	y	n	n
Export GEM	y	y	y	y
Export EPS	y	n	n	y
Export CVG	y	y	y	n
Colour/greyscales	n	y	n	n
Multi windows	y	n	n	n
Trace part image	y	y	y	y
Image tidying	y	n	y	y
Image scaling	y	y	y	n
Large images	y	y	y	y
Zoom bitmap	n	y	y	n
Zoom vector	y	y	y	n
Vector editing	n	y	y	y
Quality	4	2	3	1
Speed	3	4	4	5

Note: The speed of each package was measured at its optimum setting for each image. The actual times involved range from the 19 seconds it took *Silhouette* to trace the butterfly to several minutes for *Convector* to finish the fossil fish. Quality is necessarily subjective to some degree but to make it more objective, we compared the results to those from Adobe *Streamline*, a top end professional package on the PC which rates "5".

SILVER SENSATION

Maurice Collins looks at CD-ROM – the little silver discs that are revolutionising home computing...

Whatever the definition of multimedia (and the arguments still rage), it is one of the fastest growth areas in home computing. Multimedia is essentially a mixture of sound and vision combined with related text and other information that helps create an exciting audio-visual experience for the viewer. The images don't necessarily need to be animations, although this is quite common. As a result, multimedia means huge amounts of data. Full colour graphics take up a lot of storage space and multi-track stereo sound samples aren't exactly the kind of thing you keep on a floppy disk...

Enter the Compact Disc Read Only Memory or CD-ROM for short. We've all got used to seeing Audio CD players in hi-fi units and there are even portable and "in-car" versions. CDs offer startling clarity when compared with the old needle and plastic or cassette technology. CDs are now invading the computer world – CD-ROM drives are becoming the most sought after peripherals for PC and Mac owners though they are only just starting to feel their way into the Atari world.

WHAT IS IT?

CD-ROM might means digital sound with no background noise to the music industry but to the computer user it means space, and not only for sound samples and images. Most CD-ROM discs can hold up to 650 MB of data which is about ten times the average ST owner's hard drive! While data transfer rates and access times are much slower – typically ten times slower than a hard drive – it means that hundreds of full colour images, full motion video clips and digitised sound samples can be stored on each disc.

Does CD-ROM sound expensive? Not really – you can pick up a CD-ROM drive for less than the cost of a hard drive if you shop carefully. The only requirement in terms of connections is that the drive has a SCSI interface so it can be plugged directly into a Falcon or via a host adapter to an ST. Although most SCSI drives are relatively expensive, Apple's CD-300 costs under £300 and works well with the ST (see box).

Of course, there's a lack of access software on the ST at present but the ICD utility can access the two formats of CD-ROM that currently make up 95 per cent of the market – High Sierra and ISO9660. The storing of photographs to CD-ROM in the form of Kodak's PhotoCD hasn't arrived yet but it's likely to have a considerable impact.

WHAT CAN I DO WITH IT?

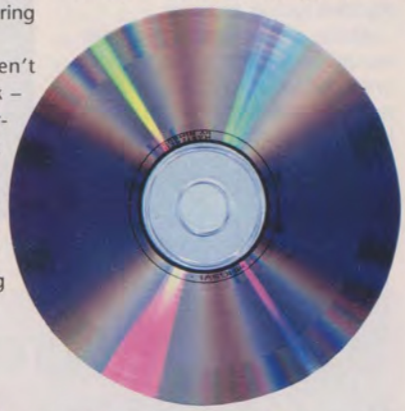
Having got a drive up and running, there are a hundred and one things you can do with CD-ROM. For professional DTP users, you have instant access to as many fonts as you want – type vendors such as Adobe, Agfa and Monotype all distribute fonts on CD-ROM and there are huge shareware collections too. Although you won't be able to access PC and Mac games or other multimedia presentations, owing to software incom patibility, you will be able to retrieve clip art and images such as those from *Gifs Galore*, a popular CD-ROM with no less than 5,000 colour GIF files on it.

What's more, you stand a very good chance of being able to play audio CDs on it too with some simple software and speakers. The two shareware utilities I tried out didn't work but I suspect this was due to having been written for TT systems. Still there should be others appearing very soon.

And the cost? CD-ROMs aren't half as expensive as people think – several magazines attach cover-mounted CDs and still cost about the same as *ST Review*. Although commercial and shareware CD-ROMs cost upwards of £40 each at the moment, as demand grows we'll probably be getting over 600 megabytes of entertainment for under a tenner. Roll on the revolution!

WHAT IS PHOTOCD?

PhotoCD looks set to revolutionise the way we use photographs. Put simply, it means that instead of taking your 35mm film to be developed into slides or prints, you can choose to have the same images stored as graphics files on a disc. With a CD-ROM player plugged into your TV or a CD-ROM drive attached to your ST or Falcon, plus some special access software, you can view the pictures on your screen, manipulate them with an image editing package or cut



ICD's small DMA-SCSI converter allows you to use a SCSI device directly with an ST.

CUMANA CD-ROM 600

Cumana, familiar to many ST owners for their excellent external floppy disk drives, has just launched a new PhotoCD-compatible drive that operates at double speed. Although designed for use with PCs, Macs and the Archimedes, it is a SCSI drive based on a Sony mechanism and works perfectly with ICD's external host adapter, The Link, and the accompanying CD-ROM driver software.

The drive is sheathed in a high quality metal case with a beige plastic front. The on/off switch is on the right-hand side with a green power on light. On the front of the drive unit is an eject button, drive access light and audio socket with volume control for attaching headphones or speakers. Disks are loaded using a caddy system, a protective case for the CD-ROM discs to minimise handling and keep them safe.

Cumana's Series 600 drive.

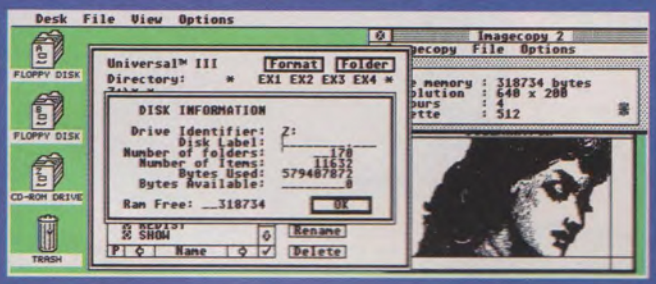
The quoted average access time is 295 milliseconds with a maximum data transfer rate of over 300 kilobytes per second – somewhat faster than a normal double-density floppy disk drive. To help boost performance, the drive also has a 256 kilobyte hardware cache to enhance the quality of full motion video (although no ST software I know of will actually support it yet).

Other features include an automatic lens cleaner and a double door mechanism to seal off CD-ROMs when they are in the drive. Contrary to popular belief, CD-ROMs can't be thrown around the room, used as Frisbees or otherwise abused – at least not if you expect them to last!

Connecting the drive to an ST is straightforward, provided you have The Link, ICD's external DMA to SCSI converter. It plugs straight into the drive's SCSI In port and is then connected to the ST's hard disk socket using a standard DMA cable.

Getting everything up and running took some playing about with the software – but only because the ICD documentation isn't up to scratch. The Cumana drive was preconfigured with a SCSI ID of 6 and there were no external DIP switches. However, the unit was a pre-production model, kindly assembled especially for this review, and Cumana are unlikely to overlook this problem when the production models come rolling off the line. Once the SCSI ID was sorted out, the Atari *Metados* drivers supplied with The Link got the CD-ROM drive up and away in no time.

If you're after a drive to work with an ST, the Cumana badge and the high speed mechanism, along with PhotoCD compatibility, make the 600 look very attractive although rather pricey.



Believe it or not, you can run a CD-ROM drive on a bog-standard ST. The desktop shows drive Z, the Cumana CD-ROM drive, installed on a 1040STFM running TOS 1.02. Imagecopy 2 is displaying some clipart from a CD-ROM disc and the Universal Item Selector's drive info command shows an astonishing 579,407,872 bytes of information on the disc!

PROS AND CONS

Relatively fast access time
SCSI through port
Excellent disc handling

No CD-ROMs supplied
No ST software

"A good quality SCSI drive that works well with The Link and an ordinary ST"

NAME: SERIES 600
COMPANY: CUMANA
CONTACT: 0483 503121
PRICE: £663.87
MIN MEMORY: 0.5MB
SYSTEM: ST/STE/TT/Falcon

EASE OF USE ✪✪✪✪✪
DOCUMENTATION ✪✪✪✪✪
EFFECTIVENESS ✪✪✪✪✪
VALUE FOR MONEY ✪✪✪✪✪

OVERALL 82%

and paste them into your DTP documents.

Although it sounds wonderfully hi-tech, it is really just a quicker way of getting images into a computer. Instead of developing prints and then scanning them using a colour flatbed scanner, you can pick them up from Boots in pre-digitised form. For professional users it means less picture degradation and a choice of resolutions on the same disc while for you and I, it offers a convenient way of storing holiday snaps – forever!

WORTH A THOUSAND WORDS...

A look at this simple set-up will convince you just how easy CD-ROM is to come to terms with. Put together at the *ST Review* office, we used a standard 1040STE with TOS 1.62 and a Philips colour monitor. The CD-ROM drive is an Apple CD-300. Apple I hear you say? Well Atari don't have a branded CD-ROM drive, and the Apple unit is the cheapest double-speed drive on the market, retailing at around £300.

To get the system working, we connected the ST's DMA port to ICD's The Link, and the other end of this small interface to the SCSI port on the CD-300. There's a CONFIG.SYS file with The Link that has to be set correctly, but this is simply a matter of editing one or two characters using a word processor. The result, as you can see, is a great GIF pic of Mickey Mouse, read from the Gifs Galore disc, and viewed via *Speed Of Light* from our cover disk. In fact, the GIF file is also on our disk – have a look at *Fantasia.Gif*...

THAT'S WRITE FOR JUST £24.99!

OFFER ENDS JULY 31, 1993!

In case you missed last month's great offers, here's a final chance to upgrade...

The response to our Write ON cover disk on issue 13 has been phenomenal – obviously you, our *ST Review* readers, do a lot of word processing and Write ON really fitted your needs. Now is your last chance to take advantage of our exceptional bargains on Write ON manuals and upgrades to That's Write – these special offers that save you up to 75% on normal prices close on July 31, 1993.

CREDIT CARD HOTLINE
0480 891819
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WPR09 LEXICON. A pure word list containing 46,209 words without slang, americanisms or other rubbish. Needs 1Mb to run with SPELLONE (spellchecker) also provided on this disk.

BRD05 AMERICAN FOOTBALL. DALEKS. STARTREK. DELTA 3. CELESTIAL CEASERS (versions 1 and 2). SPACE WARS. RED ALERT. MATCH. HANOI. OGRE. 11 Board and Strategy Games. SPLENDID SELECTION!!

ARC12 BELUM INTERACTUM – Good galaxians clone. BLOCKADE. HAUNTED HOUSE. AMORTRACK. BOING. INVADERS. MANIA. Another superb selection of arcade games.

ADV03 CONQUEST. Graphic adventure. Should take weeks to complete! (Shareware).

ADV06 BLACKDAWN. Good text adventure with excellent graphics. DUNGEON MASTER NEW LEVELS. Needs original DM disk to play.

UTL134 SAGROTAN. Must be the best virus killer around. V.KILLER v3.84. Another excellent virus killer. EXORCIST. The latest version of this V.Killer. HD RESTORE. Repairs hard drive boot sector. RIPPER and PROBE. Two programs to grab music and graphics from disks and more...

UTL120 ZX SPECTRUM EMULATOR. Needs 1Mb SPECTRUM to ST DOWNLOADER. Gives details on how to transfer Spectrum games from tape to disk for the above emulator. ZX81 EMULATOR and 89 PROGRAMS.

ARC15 CYBERTECHNICS Fast & furious arcade game. CRAZY ERBERT fast Q'bert clone. SLUG to fill the disk.

BRD09 MILE Excellent board game. D FISSION. Super Othello type game. TUNNEL VISION Excellent maze game. 3 jigsaw puzzle games. ST TIC TAC TOE, HIGH-LOW, BLACKJACK and more on this disk.

BRD12 TOWER POWER Super strategy game runs on 512K, 1Mb and 2Mb machine. Optional data disk available as BRD13.

ARC37 LLAMATRON and REVENGE OF THE MUTANT CAMELS. 2 superb games from Jeff Minter. These are a must for any game collection

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OPEN HOUSE

How easy is it to connect a CD-ROM drive to the ST?

I promised you something a little lighter this month, so let's have a brief look at a typical problem that occurred during the production of this issue.

When it was suggested that we should take a look at CD-ROM, the idea was well received and space was made inside the magazine. A CD-ROM drive is generally a SCSI device, so the connections should present no problems. We contacted some dealers to find out how far they'd got with the project, and the answer was a depressing "not very far".

To connect a CD-ROM drive to an ST requires a DMA to SCSI converter. ICD's Link is perfect, as it's simply a small adaptor and comes complete with some pretty specialist driver software. However Andrew Wright, in compiling his article on page 18, had no luck in getting a Hitachi drive to work. Apparently, the Link needs "plus five volts on pin 28 of the SCSI line" to work and not all SCSI devices provide this.

Approaching the knowledgable people in the office (after a hard search!) produced a Macintosh CD-ROM drive. I had a Link at home and the ICD software includes a *MetaDOS* system file for driving the device. Fine. Instruction book digested, we set the system up and... nothing. We couldn't even get the computer to recognise that a drive was connected let alone read from it. After an hour or so, we were ready to give up and put everything to one side – the fact that the designers needed their CD-ROM drive back had something to do with this! Not wishing to be beaten, I changed the software settings once more and the system spotted the drive. Halfway there. Playing around with the *MetaDOS* drivers produced a working drive, ready to transmit information to the ST. And all of this under the strain of producing a mag...

We discovered that the drive sells for just £249 plus VAT so, with the Link at about £100 it makes such a system a viable proposition. At the moment, there isn't much to attract the ST owner to CD-ROM as most of the software available is aimed at the PC, Macintosh, Sega or CDi/CDTV market, but if you add a PC emulator or Spectre GCR (or both) to your system, a wealth of information is at your fingertips.

A couple of the .GIF files on the cover disk this month came from a CD called *GIFS GALORE!*, a collection of over 500 megabytes of picture files on one disk. The limited range of disks available for the ST makes the decision to buy a difficult one, but with the coming of PhotoCD, there should be a lot more for the Falcon. Only time will tell...

See you next month.

Tony Kaye is deputy editor of *ST Review*, having originally joined as staff writer in June 1992. You may not see his face very often, but other parts of his anatomy are usually in view – especially his hands in the photographic step-by-steps...

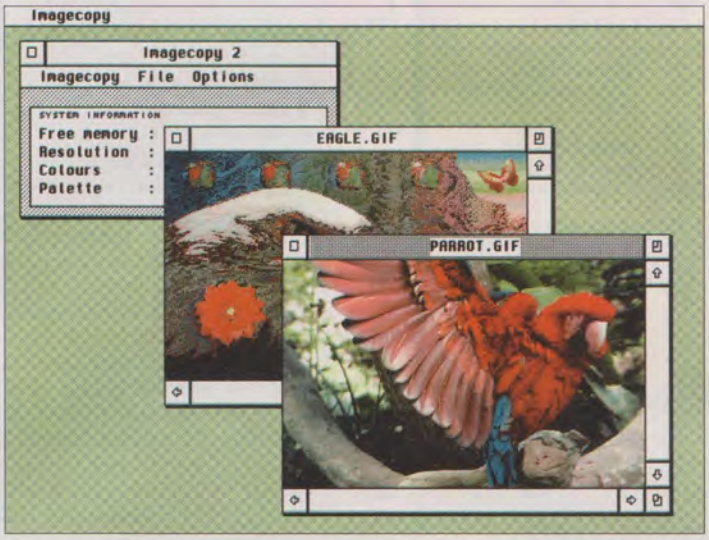
GET THE

Imagecopy was originally conceived as a rather simple snapshot utility. Ofir Gal finds that it's grown up now...

While there are many utilities in the public domain that can "grab" portions of the screen and save them in various image formats, the original *Imagecopy* had many additional features like image viewing and printing, making it very popular among ST users.

Imagecopy Colour was introduced last year, adding colour printing and various dithering techniques which enabled colour images to be shown on a mono monitor – HiSoft even recommended it for printing images created with *TruePaint*.

The ST is only capable of displaying 16 colours at a time, but the TT doesn't have such a limitation as it can display 256 colours. The arrival of the Falcon with its additional colour modes led Jeremy Hughes, the author of *Imagecopy*, to update the program in line with the graphic capabilities of the Falcon and graphics cards such as Crazy Dots.



Imagecopy 2 running on the Falcon in 256-colour mode.

WHAT CAN IT DO?

Two versions of *Imagecopy 2* are provided on disk: a stand-alone program and a desk accessory version for use inside other programs. Pictures may be saved in IMG, Degas, Targa and TIF formats and images can be converted from a wide selection of formats to the above.

Imagecopy 2 can also be used to view and print image files in a wide variety of formats: Art Director, Degas, GIF, IFF, XIMG, MacPaint, Neochrome, OS/2, PCX, RSC, Spectrum, Targa, TIF and Windows BMP. When viewing a file containing more colours than can be displayed, *Imagecopy 2* uses various dithering techniques to provide the best display. On the ST and TT, up to 6 pictures can be viewed simultaneously, while for the Falcon this number is extended to 20. Images containing up to 16 million colours can be output to a variety of printers ranging from the humble 9-pin variety through to laser printers.

Double-clicking on the *Imagecopy 2* program, or selecting the accessory, opens a small window displaying information about free memory and system colours.

A list of Imagecopy's functions are available from three drop-down menus within this window.

WORKING WITH IMAGES

Like most PD snapshot programs, *Imagecopy 2* uses the Alternate and Help key combination to capture images. Pressing the right mouse button twice saves the image or else the left button can be used to "rubber-band" the required area. A picture can also be accurately cropped by using the cursor and Shift keys in combination – the frame can be adjusted to single pixel accuracy.

There's even an option to hide the mouse; it remains on screen, allowing you to adjust the image borders, but is hidden while the image is being saved.

Selecting View brings up the file selector from which an image file is selected. The GEM window can be scrolled, moved and resized, and pressing the right mouse button takes you into full-screen mode where all window borders are removed. This is very useful for viewing images which are larger than the physical screen as scrolling in this mode is very fast. Several images may be loaded at the same time, the Tab key being used to cycle through the pictures. Hitting the Return key displays a dialogue box with information about the active image file.

A couple of dialogue boxes allow you to choose between the monochrome and colour dithering methods, and the image brightness, contrast and colour saturation. Careful use of the colour sliders can bring the dullest of images to life, especially when used in conjunction with the red, green and blue sliders for colour balance.

Regrettably, no scaling is currently

DITHERING...

The human eye can distinguish over 300,000 shades of colour and while some computer graphic systems can display millions of colours simultaneously, such systems tend to be costly and memory hungry. The ST can only display 16 colours at a time, the TT can stretch to 256 and the Falcon can display up to 65,536 colours on screen.

To enable the display of more colours, a palette system is used. The STE, for example, can choose its 16 colours out of a palette of 4096 while the Falcon has a palette of some 262,144 colours to choose from.

Dithering is a technique that allows more colours to be displayed than are actually available. Ordered dithering uses fixed pixel patterns while random dithering produces random patterns which are more pleasing with photographic images.

Half-toning works in a similar manner to ordered dithering, but uses dots of varying sizes. The illusion is very successful when using high resolution printers or type-setters. Colour reproduction is further enhanced by using slightly different patterns for each of the primary colours, so hiding the pattern from the viewer. Such a technique is used by *Imagecopy 2*.

Viewing and printing colour images in monochrome is possible by using some clever dithering techniques.

PICTURE!

ATARI ST REVIEW ESSENTIAL BUY

A TO Z FILE FORMATS

ART – Art Director images always represent full-screen ST low-res images.
PI? – Degas files, limited to full screen representation of ST and TT resolutions. The number in the file extension stands for the image resolution. 1=ST low, 2=ST medium, 3=ST high, 5=TT medium, 7=TT high and 8=TT low resolution.
PC? – Compressed Degas files.
IFF – An Amiga file format. Normally used for images with up to 256 colours but can also represent true-colour images.
IMG – The original GEM image file. This has recently been enhanced (XIMG) and represents any number of colours, from monochrome up to true-colour.
JPEG – Normally used for true-colour images and uses a data compression method which compromises detail to achieve small file sizes.
NEO – Suffers from similar limitations to the Degas format. In addition, it does not use compression.
BMP – Used by many PC programs. It uses compression to represent monochrome, 16, 256 and true-colour images.
PCX – PC Paintbrush picture file. A compressed image file with support for images containing up to 256 colours and true-colour.
TGA – Originally a PC file format. Used to represent true-colour images, compressed or uncompressed.
TIF – A very popular format which can be used to store images containing any number of colours, from monochrome to true-colour. A compressed version also exists.
GIF – This format uses very effective compression to store 256 colour images with no data loss and is very popular for file transfer via modems.

available but this is planned for the near future as is a slide show option.

PRINTING

Not many programs support colour printing and none offer *Imagecopy*'s range of features. Great attention to detail and a host of options enable high quality reproduction of images, with *Imagecopy 2* supporting virtually any printer, from 9-pin Epson compatibles to colour inkjet and laser printers. Interestingly, the program does not use GDOS for printing, but has its own custom routines which are extremely fast in comparison.

Images can be modified as per viewing and printed in colour or monochrome. When printing colour images in monochrome, various dithering options are available including ordered and random dither as well as half-toning with adjustable matrix size.

Colour printing is a bit more involved but even owners of monochrome printers can print in colour by using three or four passes, one for each primary colour and optionally black. This is only possible if your printer paper feed is accurate, and requires colour ribbons or cartridges.

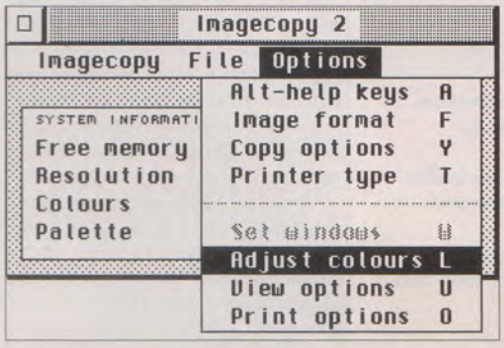
Printing can also be directed to a .PRN file which can be used to print the image by double-clicking on it from the desktop. Additionally, the colour separated image can be saved as three or four .IMG files, each containing one of the primary colours. Using these, even monochrome DTP programs can print in colour. Finally, images can be freely scaled and positioned on the page.

True-colour mode on the Falcon can display 65,536 colours simultaneously. Such images can be converted to 256 colours with Imagecopy 2.

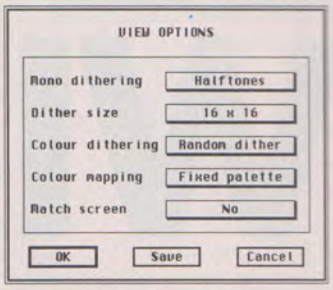
VERDICT

Imagecopy has always been a unique program and version 2 really puts it in a class of its own. It has a fast and friendly user interface which is easy to learn and yet contains enough options to suit all your needs. The manual is well written and is an education in the art of colour printing with plenty of useful information about dithering and half-tone printing as well as some very handy tips.

If you work with pictures, *Imagecopy 2* is a must – buy it!



The new menu system. Keyboard shortcuts are available for all menu entries.



Here you can choose the dithering method and matrix size amongst other options.

Flexible viewing and printing facilities
Easy to use

PROS AND CONS

No on-screen image scaling
Can't read JPEG files

"Imagecopy 2 really is the ultimate utility for viewing, converting and processing images"

NAME: IMAGECOPY
COMPANY: THE ST CLUB
CONTACT: 0602 410241
PRICE: £19.95
MIN MEMORY: 0.5MB, 1MB RECOMMENDED

EASE OF USE
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OVERALL 95%

Canon BJ-230

Ever cursed your printer for limiting you to A4 paper? John Mallinson discovers a way to avoid such profanity...

Canon's BJ-230: the cheapest inkjet for panoramic printing.

WIDE BOY...

The variations on Canon's BJ bubblejet printer theme seem endless. The latest is the BJ-230, an A3 version of the smart BJ-200 'executive printer' which we reported on in February.

Care is needed with the terminology here. This is an A3 printer and takes paper sizes up to A3 portrait (a print width of 11.4") which is not the same as a "wide carriage" printer that can take A3 landscape paper (13.6"). The accounts department will probably use an A3 or wide carriage printer for producing spreadsheets. And the rest of us? Well, it would be nice to be able to break out of the confines of the universal A4 format from time to time – large drawings, over-sized DTP pages and so on.

The BJ-230 is a well constructed and handsome machine which will look familiar if you've ever seen a BJ-10, 20, or 200. It shares their upright design with controls on the top and a paper feeder (100 sheets) on the back. Compared with wide carriage printers it takes up surprisingly little desk space, but when you come to use it you'll have to clear an extra A3-sized area in front where the paper comes out onto its wire catcher.

Canon BJ-230 fonts (Epson mode)

High speed mode	ABCDEFGabcdefg
Roman	ABCDEFGabcdefg
Sans Serif	ABCDEFGabcdefg
Courier	ABCDEFGabcdefg
Prestige	ABCDEFGabcdefg
Script	*ABCDEFGabcdefg*
ORATOR	ABCDEFGABCDEFG
Orator-S	ABCDEFGabcdefg

Type styles:
Italic, **bold**, underlined
Outlined, Shadowed

10cpi: the cat sat on the mat
12cpi: the cat sat on the mat
15cpi: the cat sat on the mat

Typical print out of the on-board fonts. Impressive.

For A3 landscape printouts, you either have to rely on your software to rotate the page through 90 degrees (which not many ST programs can) or use the printer's ingenious reduction feature. Press a couple of buttons on the control panel and output size is shrunk by a third so that A3 landscape will fit onto an A4 sheet on its side.

The BJ-230 has a clear manual and the printer is simple to operate with only four buttons to worry about, apart from two banks of DIP switches which lurk under a panel on the top. As with other Canon BJ models, these only need to be touched if the printer emulation needs to be altered. This can be either Epson LQ or Canon BJ.

In Epson mode you have a choice of seven typefaces (Roman, Sans serif, Courier, Prestige, Script, Orator, and Orator-S) while in BJ mode you only get two (Courier and Prestige). You can't select typefaces from the control panel but word processors such as Compo's *That's Write!* and *Write ON* have comprehensive support for the printer's internal fonts in Epson mode. If you use a word processor with its own fonts such as *Calligrapher* or *Rédacteur*, this won't be a problem.

Changing font size uses the old-fashioned cpi (characters per inch) definition rather than today's increasingly common typographical method which specifies the sizes in points. From software you can order 17, 12, 10, 6, or 5 cpi with correspondingly bigger sizes.

Inkjet printers are definitely getting faster and this is no exception. It notches up 248cps in high speed mode (about 30 secs per A4 page), 173cps in high quality (about 45 secs per page), and 124cps in "super high quality". The latter is supposed to print with more precision but I could see no obvious improvement over HQ although it is slightly slower and whisper quiet and can be recommended for printing in places such as "a hospital, library, or late at night at home"...

The BJ-230 is an attractively designed, high quality printer, equally happy with either A3 or A4 paper. From an RRP of £399 it will probably sell for about £320 plus VAT which will put it in the same price area as A3 dot matrix printers. If you generally use A4, but sometimes want A3, the BJ-230 is well worth considering.

INSIDE INFO

There are four wide carriage inkjet printers that can print a full 13.6". All have tractor feed (which the BJ-230 lacks), but the sheet feeder is extra in three cases. All are theoretically faster than the BJ-230, but more expensive.

One of these bigger models would be more suitable for churning out page after page of spreadsheet data but for that sort of heavy work, a dot matrix printer would be much cheaper to run...

The prices below are "street" rather than RRP.

Brother HJ770 (£430) – Good print but complicated to set up.

Canon BJ-330 (£360) – Wide carriage version of excellent BJ-300. Conventional design with good print quality and speed.

Epson SQ1170 (£560) – The Arnie of the inkjets: muscular and well built, fast and expensive. Scalable Roman and Sans Serif typefaces.

IBM Execjet 4072 (£430) – Old-fashioned looking model that comes with the "Big Blue" pedigree. Tractor feed and sheet feeder are standard.

Ingenious reduction feature
Excellent print quality

PROS AND CONS

Can't switch fonts from control panel
DIP switches to set mode

"The perfect printer for the person who usually prints to A4 paper but occasionally requires the extra width of A3"

NAME: BJ-230
COMPANY: CANON
CONTACT: 081-733 3173
PRICE: £468.82

EASE OF USE ✪✪✪✪✪
DOCUMENTATION ✪✪✪✪✪
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- **100 Continuous Tractor Feed Address Labels**
- **5 Continuous Envelopes on Tractor Feed**

9 PIN 192 CPS 80 COLUMN

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- 192cps Draft, 48cps NLQ
- 1K Printer Buffer + 2 Fonts
- Parallel Interface
- Graphics Resolution: 144 x 72dpi
- Epson and IBM Emulation
- Auto Sheet Feeder Option
- 12 Month Repair Warranty
- FREE Silica Printer Starter Kit

PRINTER RRP	£149.00
STARTER KIT	£25.00
TOTAL VALUE:	£174.00
SAVING:	£64.01
SILICA PRICE:	£109.99

BEST BUY! **£109.99** +VAT = £129.24 Ref: PRI 8195

24 PIN 240 CPS 80 COLUMN

- Seikosha SL-90 - 24 pin - 80 col
- 240cps SD, 192cps D, 84cps LQ
- 20K Buffer + 2 Fonts
- Optional Font ROM
- Parallel Interface
- Graphics Resolution: 360 x 360dpi
- Epson LQ850 Emulation
- Built-In Semi-Automatic Cut Sheet Feeder - Paper Parking Standard - Optional Automatic CSF
- 12 Month Repair Warranty
- FREE Silica Printer Starter Kit

PRINTER RRP	£199.00
STARTER KIT	£25.00
TOTAL VALUE:	£224.00
SAVING:	£65.00
SILICA PRICE:	£159.00

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9 PIN 300 CPS 80 COLUMN

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- FREE Silica Printer Starter Kit

PRINTER RRP	£185.00
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READ BETWEEN THE LINES!

If you've taken us up on our free CIX membership offer, now's the time to ensure that your telephone bill doesn't go through the roof! André Willey to the rescue...

In last month's *Atari ST Review* we introduced you to one of the UK's foremost public-access computer conferencing systems, the Compulink Information eXchange – or CIX, as it is better known. Many of you will have taken up our special free CIX registration offer, which we continue to offer on page 9.

However, even though your registration is free, there are still on-line connection charges to worry about. Off-line operation enables you to receive all of your messages in one big file, then log off from the system and read through everything at your leisure. Then, when you've written your responses, you go back on-line and send them to CIX for everyone else to read.

On the ST, this process can be fully automated by using the *Cixread* and *CixComm* suite of programs, provided on this month's cover disk. There are several files provided. Briefly, *CIXCOMM.PRG* is the master program which you should run each time you want to use the system. It will then call on the other programs as required. These include *CIXREAD.PRG* (the off-line reader itself) and *XYZ.TTP* (the file transfer module).

When you first run *CIXCOMM.PRG* it will ask for your CIX nickname and password. To acquire these, you must have completed at least one manual logon, as described last issue. If you haven't done so yet, just enter some dummy values for now, log on by hand to register and enter your new nickname and password into the Configuration Editor.

A SAMPLE READ

To give you a flavour of what life on CIX is all about, we've provided a number of sample messages. To read these, you must tell *CixComm* to enter the *Cixread* subsystem. This can be done from the initial dialogue box, or from the 'Split, then run Cixread' menu option. On a floppy drive, the process of splitting the supplied message file into separate conferences and topics may take a little while.

Cixread, unlike *CixComm*, is mostly a command-driven system without a menu bar but with lots of options to choose from – you type your instructions as simple words. This makes *Cixread* as close as possible to the real CIX environment.

For now, simply press the <Return> key and *Cixread* will show you the first discussion topic that contains new messages – which in this case, will be our very own 'streview' conference. Each time you press <Return> again, *Cixread* will display a new message.

If you come across a message that is answering someone else's question, you can use the ORIGINAL command to view that previous message. You can also move around the topic by using the SKIP command. SKIP TO FIRST and SKIP TO LAST are fairly obvious, but you can also use SKIP BACK 20 to go backward by 20 messages, or SKIP 10 to go forward 10 messages. To read a particular message, just type its number.

You'll quickly get a feel for the style of messages posted on CIX, and will want to add your own comments to a discussion. To do this, use the COMMENT command and type your response into *Cixread*'s simple text editor (the keyboard commands are listed in a text file in the *DOCS* folder). When you've finished, press the <Esc> key to exit from the editor and type ADD to add the message or QUIT to abandon it if you're not happy with what you've written.

When you create a message in this way, it will be stored on your own disk drive until you next go online to CIX, at which point *CixComm*'s Auto-Sequence system will post all of your pending messages automatically, before it fetches new ones for you to read.

If you decide you've read enough of a particular topic, the NEXT command will skip any further messages and move on to another topic with unread messages. If you decide you want to read the messages in a specific conference, the JOIN command will show you a list from which you can choose. There is a similar command to move to another topic within the current conference, called SWITCH.

There are many other useful com-

To download a file from CIX just type FDL <filename> or FDL on its own and you can choose from the current topic's off-line file list.

```
Select file to download:
Misc. Utilities

chkflist.lzh      11292  Check discrepencies in offline mod
cixtest2.lzh      37427  New version of messagebase tester,
                         to automatically delete older offl
cixtestb.lzh      40339  Betatest of Cixtest version 2.3 (1
prune.lzh         12618  Message pruner version 1 (27 Jan 9
                         Note: Compatible with registered v
pruneall.lzh       6789  Generate prune script for prune
prunenv.lzh        9838  Prune without check for number of
modlist.arc       14762  Neaten up your Cixread file & fold
                         Note: Compatible with registered v
alphaord.arc       5438  Sort CONFLIST.DAT into alpahbetic
dustbin.arc        9668  Deletes all other files from its o
cixcomm.nic        5488  CixComm icons for NeoDeskJ (by nem
cix.nic            7792  Neodesk icons for Cixread folders,
diskfree.lzh       6696  raggorb's disk free space reporter
                         profile for a quick run down on di
```

```
**********************************************************************
**                              Cixread                             **
**                 The Off Line Reader for the Atari ST             **
**                          Version 0.3  May 24 1993                **
**********************************************************************
Script file path = C:\CIXCOMM\
Working directory = C:\CIXCOMM\CIXREAD\.
Notebook = C:\CIXCOMM\CIXREAD\NOTEBOOK.TXT.

New mail: Memo 253791, From: streview@cix.compulink.co.uk
New mail: Memo 253792, From: andre@cix.compulink.co.uk
New flist for topic in atari.st.olr
New flist for topic in atari.st.olr

Type HELP for help on any Cixread commands, BYE to exit

Main:
Checking for conference activity.


streview/general: first available: 1, last available: 32.
Last message read: 1  -  30 messages unread.


Read:
```

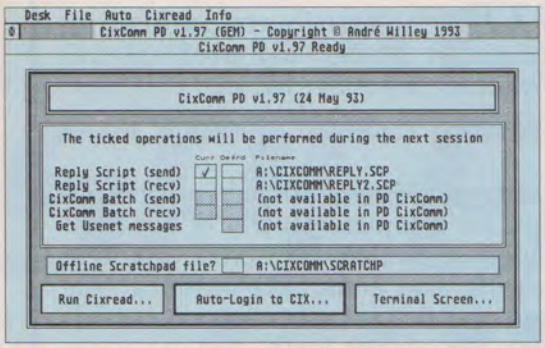
Starting a Cixread session. Press <return> to see the first topic that contains unread messages.

If you get stuck in Cixread, type HELP for a list of commands. To get help on just one command, type HELP <command>

```
==========
streview/general #1 of 32, from streview, 384 chars, May  13 18:59 93
----------
TITLE: Hello One And All...
...to the general section of the ST Review conference.

This will be used for general chit-chat and will include bitching
about the magazine, pointing out the latest typos and, hopefully,
ideas for future pieces. Some of you may end up writing for us...

Vic Lennard, Editor.


Read:help comment
COMMENT:
        COMMENT [[<conference>] <topic>]

        post a comment to the current message. If a topic name is supplied,
        the comment will be posted to that topic in the current conference
        with a title indicating the message number and the topic of the
        original message. If a full conference and topicname are supplied,
        the message will be posted there

Read:
```

MAIL COMMANDS

<Return>:	Reads next unread message.
<number>:	Displays the specified message.
AGAIN:	Re-displays the last message to be viewed.
DELETE:	Delete the current message – can be recovered using the UNDELETE command.
FILTER NAME/SUBJECT = <string>:	Sets a filter so that SHOW only displays those messages that match the username/subject matter.
PRINT:	Prints the current message (or a specified message).
PURGE:	Permanently removes all the old deleted messages from your disk.
QUIT:	Exit mail and return to conferencing system.
READ/ALL <memo>:	Read the specified message or all messages.
REPLY:	Reply to the current message.
TO <username>:	Sends an email message to the specified person.
STATUS:	Displays a list of all available mail.



When you run CixComm, it will ask you what you want to do next. The ticked boxes above the buttons indicate if any scripts are currently awaiting uploading, or if a scratchpad containing on-line messages needs splitting into separate Cixread topics.

MAIN COMMANDS

<Return>:	Moves to first conference with unread messages.
BYE:	Exit from *Cixread*.
FIND <string>:	Searches the offline copy of the CIX conference list for any occurrences of <string>.
GET CONFLIST:	Fetches a copy of the full CIX conference list next time you log on.
GET RESUME <nickname>:	Fetches the resume (description) of a particular CIXen next time you log on.
HELP or HELP <command>:	Display help information, optionally on a particular command.
JOIN <conference> <topicname>:	Joins a conference/topic.
MAIL:	Enters the electronic mail system.
OPT:	Allows you to change your *Cixread* setup options.
SHOW:	Shows you all the topics for which you have any off-line messages.

CONFERENCE/TOPIC COMMANDS

<Return>:	Reads next unread message.
<number>:	Display the specified message.
AGAIN:	Re-displays the last message viewed.
BACK:	Re-displays the message you were viewing when you typed ORIGINAL.
COMMENT:	Make a comment to the current message.
FDL <filename>:	Download a file from the file list of the current topic when you next log on.
FFIND <string>:	If an off-line file list is available, this command searches it for any occurrence of <string>.
FIRST:	Move to the first available message.
FLIST:	Displays the off-line file list for the current topic.
GET FLIST:	Fetches a copy of a topic's file list when you next log on to CIX.
LAST:	Move to the last available message.
NEXT:	Skips to the end of the current topic and moves on to the next topic with unread messages.
ORIGINAL:	If the current message is a comment, this will display the original message.
PRINT:	Prints the current message.
REPLY:	Reply via mail to the poster of a conference message.
RESIGN:	Opposite of JOIN, this allows you to resign from a conference or topic.
ROOT:	If the current message is a comment, this displays the message that started the thread.
SAY:	Post a new message in the current topic.
SEARCH <string>:	Searches the current topic for <string>, displaying each message in which the string is found.
SKIP/BACK/TO <number>:	Allows you to skip to a particular message number, or forwards or backwards by a given number of messages.
SQUICK <string>:	As for SEARCH, but only displays the message number and the line containing the search string.
SWITCH:	Switch to a different topic in the same conference.
TNEXT:	Like NEXT, but doesn't mark any existing messages in the current topic as unread.

mands available while reading messages. REPLY will allow to you send a private response to the author of a message – useful if you don't want the world to see what you're saying! The PRINT command will print out the current message on your printer.

One very useful feature of CIX is the file area which can be associated with each topic. *Cixread* and *CixComm* make good use of this feature by allowing you to use off-line commands to fetch the full list of files for a topic (GET FLIST) and then to display it on screen (FLIST). To download one of these files, type FDL and you will be able to choose the filename you require from a selector box. If you already know the name then you can type FDL <filename>.

Before you leave the realms of *Cixread*, type MAIL. This will leave the conference you are currently reading and enter your own private mailbox. Any messages you send or receive in here are for your eyes only, and will not be seen by any other CIXen – except for the intended recipient of the message, of course!

Again, to display your unread mail just press the <Return> key to give... your own personal messages of welcome! If you want to reply to any mail messages, type REPLY. You will find yourself in the same text editor as before, and once again you press <Esc> to finish, and type SEND to send the message. Similarly, if you want to initiate a message of your own, just use the command TO <username>, and enter your message as above.

TIME TO PLAY!

Now you've finished looking around *Cixread* for the moment, the time has come to transmit all of those exciting messages that you've created to CIX itself.

First, type BYE to leave *Cixread*. *CixComm* will detect whether there are any messages waiting to be sent, and if so it will offer to do the job for you. There's no need to upload your replies as soon as you've created them off-line; they will be stored for as long as you like. However, it's not a good idea to leave them hanging around too long, or you'll end up with a severe case of 'blinker's lag', where your answer to someone's question is the tenth identical response!

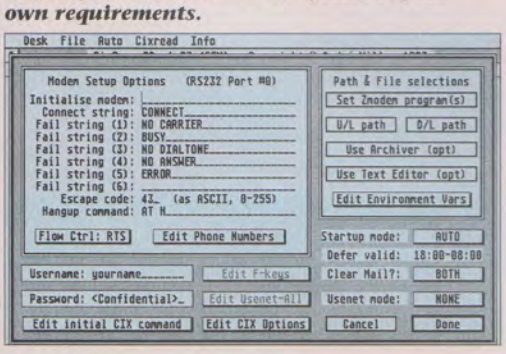
Even if there are no replies to send, you can still initiate the logon process manually by selecting the 'Logon + Auto-Sequence' option from the Auto menu. From here on, the process is totally automated. *CixComm* will dial in to CIX (it even knows several phone numbers for CIX, in case one is engaged). Then it will execute all of your off-line instructions; sending messages, getting files and file lists, replying to mail, and so on. This task is known a "running a script". After it's completed all of your tasks, it will get on with its own. Any unread messages in your conferences will be filed and transferred to your own disk drive, as will new mail messages. Once everything is done, *CixComm* will log off from CIX, and then separate the new messages into conferences and topics ready for you to read them in *Cixread*.

This brings you right back to square one. There are now more messages to read, more files to download, and so it goes on.

As you get to know *Cixread* and *CixComm* better you can start to customise the suite to your own requirements. For example, I have *CixComm*'s 'Startup mode' in the Configuration Editor to AUTO, and I usually keep my on-line mailbox tidy by setting the 'Clear Mail?' mode to BOTH.

I look forward to meeting some of you on-line as you explore the fascinating world of CIX...

The CixComm Configuration Editor, which allows you to customise the system to your own requirements.



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The usual upgrades cost £30 but as an *ST Review* reader, you can upgrade to the full versions for just £20 with this coupon. For details of the improvements, check out the information screen for each program as it loads.

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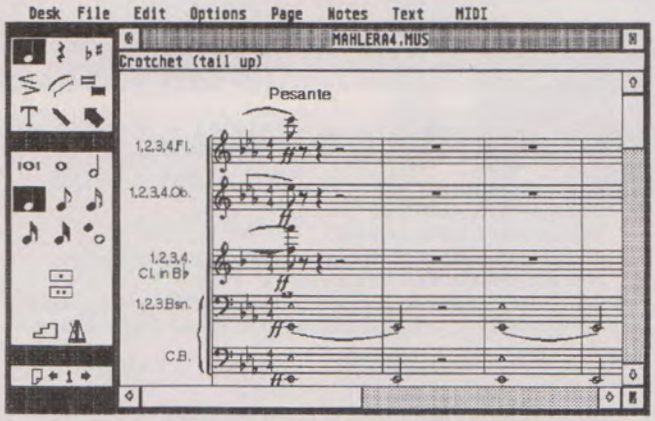

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AT LAST SPEEDO GDOS!

...a scaleable fonts standard for the ST

Speedo GDOS is the new fonts system from Atari that replaces the old GDOS system. The scaleable font packs are all genuine Speedo fonts from the makers of Speedo, fonts company Bitstream.

When Ofir Gal previewed Speedo GDOS in issue 14 of ST Review, he said "screen updates and scrolling are very fast and output quality is superb". Now you can get Speedo GDOS with the Speedo Starter Pack.

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All the font packs except the starter pack contain both SPEEDO and PostScript Type 1 fonts. This means that anyone who has software requiring Type 1 but not SPEEDO can use the same fonts with both types of programs.

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PRODUCT INFOMATION

1. Speedo Starter Pack – Price £39 – 18 Bitstream Speedo fonts, includes full copy of Speedo GDOS:
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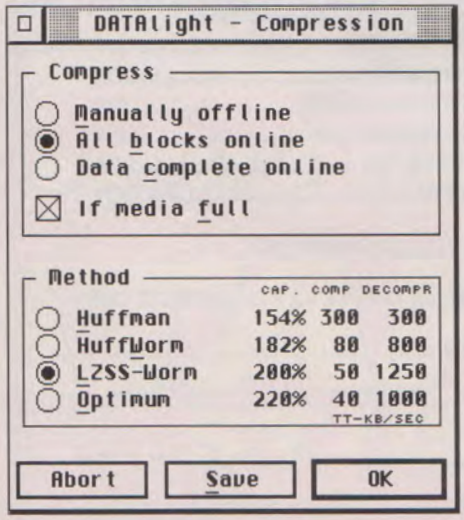
DISK DOUBLER...

No matter how much RAM or disk space you have, more is always useful. Ofir Gal pays his money and doubles his disks...

Not so long ago, a 40MB hard disk seemed massive. With true-colour images and 16-bit stereo samples, even a 100MB drive doesn't go very far and large capacity hard disks are expensive. One solution to this problem comes in the shape of *DataLite* – the disk doubler.

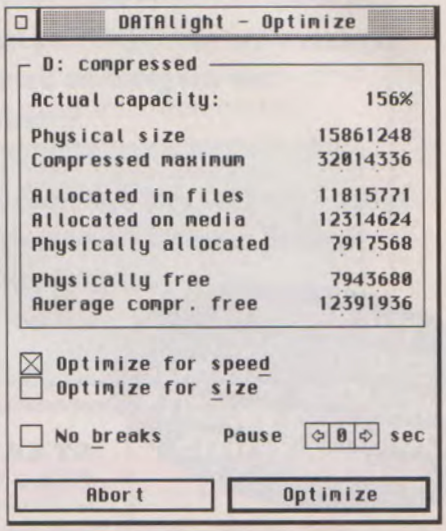
The *DataLite* package includes three files; a tiny program, its desk accessory equivalent, and a system file which contains the program data. Sharing data in this way saves space for starters, with the program and accessory each being only 756 bytes. While being virtually identical, the program serves a double purpose. When run from the desktop it allows you to set the various parameters but if run from the auto folder, it installs *DataLite* into memory. From that point, *DataLite* invisibly compresses and decompresses data on the fly, effectively doubling a disk's capacity.

There's a 33-page manual which explains how to use the program and also gives details of the internal workings. Technical details are provided for data recovery purposes and the use of disk sector editors such as *Knife ST* or *MemFile*.



DataLite uses Huffman or LZW compression. The former is faster but less effective than the latter. The fourth algorithm is a combination of the two – DataLite uses whichever is best.

The optimisation dialogue box showing the various disk statistics. The value at the top is the actual compression ratio achieved so far while the bottom figure is an estimate of free disk space.



DataLite is compatible with all Atari computers and runs in all screen modes. It also runs under *MultiTOS* and all dialogue boxes are independent windows that can be moved around the screen. In this way it is possible to have several dialogue windows open at once yet still have access to the menu bar. Additionally, all buttons have keyboard shortcuts and some can even be defined by the user.

INSTALLATION

Before *DataLite* can operate, each drive has to be compressed, be it a hard disk, floppy drive or even a RAMdisk. The only drive that cannot be compressed is your boot drive and so the manual recommends repartitioning the hard disk with a small boot partition. Selecting the Drives button brings up a dialogue window that consists of two rows of buttons. Selecting a drive button enables the Newly Compress function and if the drive already contains data, this must be compressed by clicking on the Optimise button.

The next dialogue window lets you set parameters such as sector size, virtual number of sectors as opposed to the real number, and the maximum number of root directory entries. This is set to 112 by default but *DataLite* enables you to select any number. *DataLite* automatically chooses the best values for you – if it didn't, this program would be unusable for the majority of ST owners!

The last stage in preparing a drive is the actual compression with only two options. The first optimises the disk for speed, a similar process to a defragmentation program like *Diamond Edge*, ensuring that files on the drive are on continuous sectors which in turn saves on disk access time. The other option produces the best compression ratio, but the down side

HOW DOES DATA COMPRESSION WORK?

DataLite uses data compression algorithms similar to those used by programs like ARC and ZIP. The idea behind all forms of data compression is to find repetition in any chunk of data. A simple example, although rather artificial, is the sequence of characters AAAADDDFFFFF which under normal circumstances would occupy 12 bytes of storage space at one byte per character. This sequence can easily be compressed to 4A 3D 5F, which would take up just six bytes, a 50% compression rate! While you are not likely to find such a sequence in a text file, it is quite common in programs and graphics files.

Another method is to scan a file for word repetition. The word "compression" has appeared quite a few times in this article and uses 11 bytes of disk space each time it appears. A simple compression method would be to use an abbreviation or a unique symbol for compression. Square brackets have not been used in this article at all, so the compression program might put the statement [=compression at the beginning of the file and then replace each occurrence of the word compression with the open bracket. This would save 10 bytes each time. In a similar manner, the phrase data compression can be assigned a different symbol – {=data [, perhaps. The phrase, which is 16 characters long, has been shrunk to a single character. The algorithm can work its way through the text and look for repetitions of many terms to achieve staggering rates of [– get the idea? This also explains why some files compress better than others and most compression systems are geared towards text files.

When reading the file, the reverse happens. All symbols and shortcuts are expanded and the file returns to its original form.

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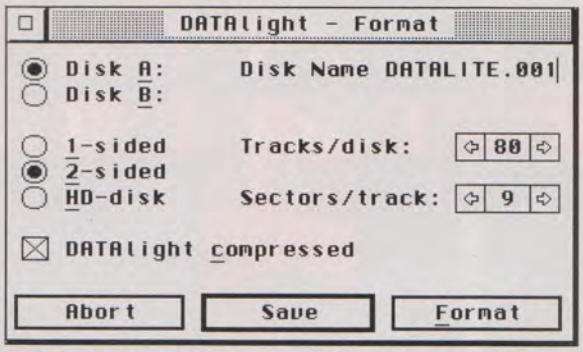
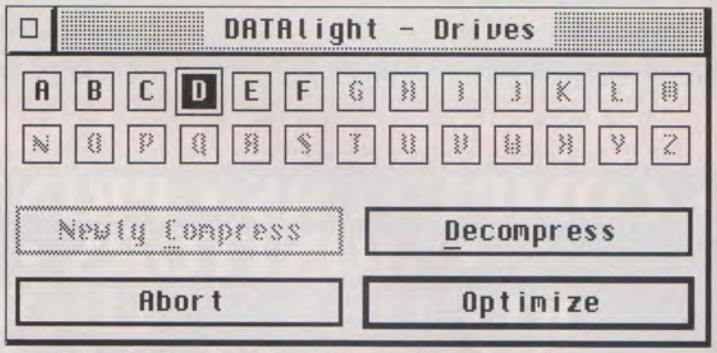


Floppy disks can also be compressed and DataLite provides fast and flexible disk formatting.



The Drive Selection box. Here drives can be selected for compression and optimisation.

of this is that disk access is slowed down.

Clicking on the Optimize button starts the compression process which takes several minutes. When complete, *DataLite* details how effective the compression has been and how much free space is now available. On a 16MB drive which contained programs, data files and compressed images, this resulted in a compression ratio of 156%; the actual free space was just under 8MB while *DataLite* free space was over 12MB, calculated by judging how well data has been compressed so far.

OPTIONS

DataLite works by compressing data on writing to disk and then de-compressing when read. While this happens automatically and invisibly, compression is quite demanding on the processor and can slow things down, especially on a standard ST. To achieve the optimum balance between speed and compression ratio, *DataLite* supports four distinct compression algorithms and can also be set to skip the compression process under certain circumstances.

The Compression dialogue box shows the various compression methods. The manual recommends the fourth one, which decides which of the other three to use depending on the file type! In practice, this method proves too slow on a standard 8MHz ST and HiSoft recommend using the top Huffman algorithm, giving an average increase of 50% to 60% in disk space. However, the slower algorithms can more than double disk capacity.

DataLite also includes floppy disk formatting facilities which appear to be very fast and extremely reliable. It can format single and double sided disks as well as high density floppies and the sector and track characteristics can be set freely although the manual advices against using extreme settings. Disks can also be formatted as *DataLite* compressed disks, which saves you having to go through the compression procedure. All disks formats use the "Twister" format which is almost twice as fast as the standard desktop formatting function.

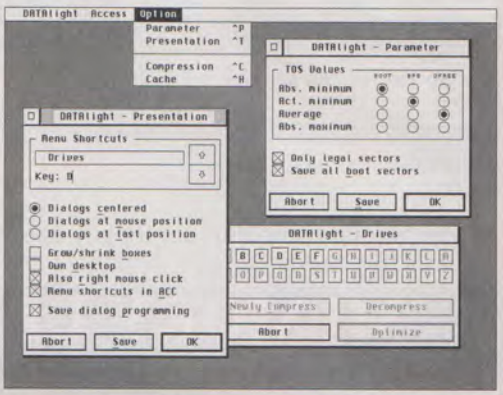
Finally, you can increase the GEMDOS cache, so improving disk access speed and add folder slots, making the *Folderxxx* program redundant.

IN USE

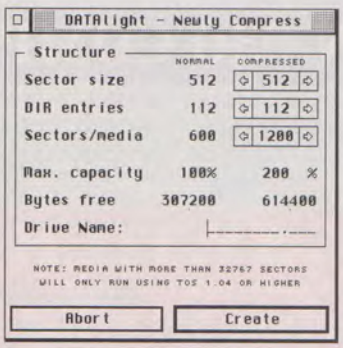
DataLite seems to be a very reliable program; during two weeks of testing no errors or crashes occurred. There is however a noticeable slowdown with hard disk access about 50% slower and RAMdisks substantially more so. There is no speed difference with a floppy disk as the time spent compressing or decompressing results in less physical disk accessing. With floppy disks, the best compression algorithm more than doubles disk capacity without any speed degradation.

As *DataLite* uses a custom disk directory structure, a crash halfway through writing to disk will result in some or all data on a disk being lost. While this is also true when not using *DataLite*, the chances of a major data loss on a standard system are much slimmer.

The procedure is certainly transparent – you just set it up and forget about it. After the initial setup there is no need to run the accessory or program at all; once installed from the auto folder it just does its work while everything looks and feels normal.



The new face of ST programs. Multiple dialogue boxes can be accessed with keyboard shortcuts for every single button. This design means that you are never locked inside a box, unable to access the menu bar or desk accessories.



When a drive is compressed, parameters such as maximum root directory entries can be changed.

INSIDE INFO

DataLite works by compressing data as it is written and de-compressing when read. By modifying internal structures, *DataLite* fools the ST into thinking that a larger disk is attached to the system. Since *DataLite* can never be sure how well it can compress data, you may get a disk full message although it looks like there is plenty of space left. This is because *DataLite* has tried to compress the file to fit on the disk but has failed.

Disk editors work quite happily with *DataLite* installed, as long as they do things the "legal" way which is use the documented system calls to access the disk. Fortunately, most do. There is however a drawback to this; "undelete" programs cannot work successfully on a DataLite compressed drive. In addition, compressed drives cannot be decompressed without losing the data they contain.

PROS AND CONS

Much cheaper than a larger hard drive
Excellent user interface
Impressive compression ratio

Can be slow
A little difficult to find the best settings

"Doubles your disk space but substantially slows down hard disk accesses on a standard ST"

PRODUCT: DATALITE 2
COMPANY: HISOFT
CONTACT: 0525 718181
PRICE: £49.95
MIN MEMORY: 0.5MB
SYSTEM: ANY

EASE OF USE ✪✪✪✪✪
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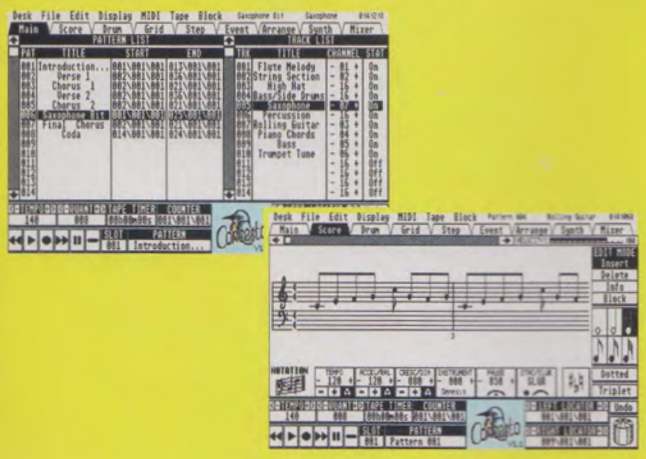

IN COLOUR!

Next month, *ST Review* delves into every conceivable aspect of colour, including:

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WRIGHT ISSUES

Ye Olde TOS!

I'm pulling what's left of my hair out at the moment but if I told you why, it might surprise you. I've just traded in my trusty Mega ST – the one with that lovely Turbo accelerator in it – and bought a new Falcon. But before you get the wrong idea, it's not the Falcon that's causing the problems. It might not be quite as fast as my 25 MHz machine and I might have to ditch a few utilities, but it isn't causing me any real trouble.

No, the blame can be laid fairly and squarely at the foot of my other ST. It's an STFM with the old TOS 1.02 in it and until now I've used it just for the odd game and occasional colour screenshots (when my son isn't looking, that is). I'd quite forgotten how horrendously slow it was at file handling. Now that it has a big 100MB plus hard drive hanging off it, it is working twice as hard. The only problem is it's doing it at a third of the speed.

So what should I do? Give the ROM chips to the local museum and pay for an upgrade? Or grumble at Atari for not getting it right first time? The *ST Review* mailbags are still full of snivellers complaining about TOS this and TOS that. OK, so there have been some incompatibilities.

So what? Each new release has been a big improvement on the previous one and if you've ever tried using a hard disk and TOS 1.02 without resorting to physical abuse of your ST, you'll appreciate it all the more.

People like that are actually one of the reasons for the decline of the Atari market. Far too many ST owners aren't willing to spend a penny in support of their favourite computer. They seem to think they should get free upgrades and bug fixes. What, on a sub-£300 computer? Who are they kidding?

On the Mac, you need System 7 to run some of the latest software and there's plenty of PC software, including games, that won't run on anything less than DOS 5.0 (the last release but one). You can snivel as much as you like but you have to BUY the upgrade if you want to keep up with the times.

TOS 1.02 is so chronically slow that anyone who's using it seriously needs their head examining. Unfortunately, it won't be long before we get a letter from some vegetarian anorak in Poddlington-on-the-Hill complaining that he (all anoraks are he) can't get *MultiTOS* to run on some disk-loading, antiquated version of TOS. Please, please, please let me answer his letter...

Andrew Wright is a regular contributor to various Atari, PC and DTP magazines and has been writing for *ST Review* since its inception. His favourite pastimes are fishing and golf from which he takes short, occasional breaks to write the odd article or twenty...

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COMMODORE – Three magazines serve the dedicated Amiga fraternity. For games players there is *Amiga Action* (£3.95) and *Amiga Force* (£1.95), while *Amiga Computing* (£2.99) covers every aspect of this versatile machine. Owners of the C64 will find all they need in *Commodore Force* (£2.95).

ATARI – For the Atari ST enthusiast there are three magazines – *ST Action* (£3.95) for gamers, with *Atari ST User* (£.3.40) and *Atari ST Review* (£3.50) satisfying the more general ST owner.

NINTENDO – The whole of the ever-expanding Nintendo scene is covered by *N-Force* (£.1.95), while dedicated fans of the Super NES have *Super Action* (99p) and for Game Boy freaks there's *GB Action* (99p).

PC – Most dynamic newcomer on the PC magazine scene is *PC Home* (£3.95), covering both business and leisure interests. *PC Today* (£3.95) is devoted to supplying practical solutions for the small businessman.

SEGA – All the Sega games machines have their champion in *Sega Force* (£1.95), with *Mega Action* (99p) serving the needs of Mega Drive owners *(to be launched on May 20)*.

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N PARIS FOR YOUR NEWSAGENT TOO!

Sick of swapping floppies between an office of STs? In that case, you need a network. Nial Grimes manoeuvres his way through the mass of cables and reports on two affordable solutions...

JOINING FORCES!

As we all know, Murphy's law clearly states that whatever ST you are using, the data file you need will always be on another hard disk – usually at the other end of the building! The solution to this all-too-common problem is to link, or "network", your STs, giving file access to any machine, or node, connected to the system.

And the benefits don't end at file-sharing. Peripherals such as printers and scanners can also be shared, making cable juggling a thing of the past; plus you save megabytes of disk space by only keeping one copy of each program on the network!

PC and Macintosh users have been enjoying the benefits of local area networking for years, but with ST networking software appearing by the minute and installation as simple as plugging in two cables, it looks as though the year of the ST network may have finally arrived!

SLOW TRAIN TO SOMEWHERE

MX2Net is a public domain program designed to link two STs together via a MIDI connection. This approach limits its speed somewhat, but the advantages are obvious in terms of cost: One set of MIDI leads and a PD disk – costing perhaps £5 in total – and you have a basic, fully functioning network!

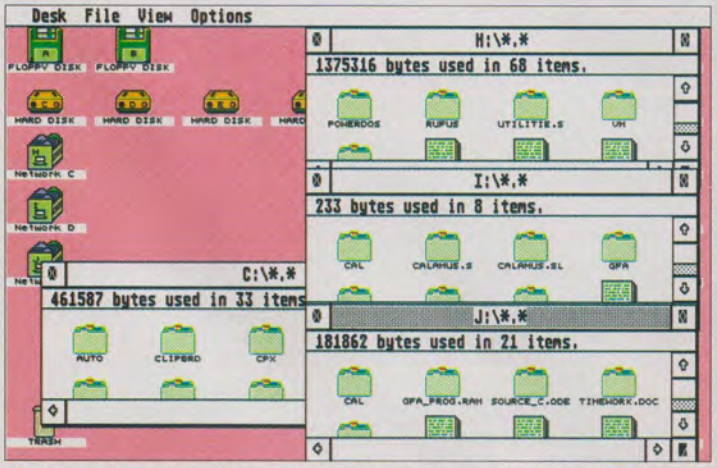
Documentation is paltry, but the installation is very straightforward. A plain-text configuration file is used to describe how the whole kaboodle should be set-up and comprises a number of three letter "drive-mapping codes". To map ST1's partition C onto ST2's partition G, for example, the command would be "cgr" – the "r" standing for "read access only". A maximum of 14 network drives can be defined, which should be more than enough for most purposes.

Once the configuration has been decided it's just a case of running the *MX2Net* program on both STs and installing your new drives from the desktop. All files from both machines should now be accessible from within any application, the only noticeable difference being a small decrease in speed as the directory window is displayed. The software claims to be multi-tasking, but in general it's best to leave the server alone and just work with the client – *MX2Net* tends to get a bit confused if you start swapping machines at random.

As supplied, there's no support for network printing – drives are the only devices that can be shared – although programming information is provided for the adventurous. The network driver can be contacted directly from any programming language capable of accessing operating system routines. To illustrate the point, several utilities are supplied together with Modula-2 source code and these include a "network status" program and another utility which shows the screen display on the remote ST. Neither appear to run on the Falcon unfortunately.

Compatibility is generally pretty good, although naturally one or two applications take a dislike to the network driver. However this doesn't stop you copying any data files you need to a local drive before running the program in question, so it's not a major problem.

MX2Net is very much a bare-bones system, but if all you need is basic file-sharing it's perfectly adequate. The speed decrease is hardly noticeable on small data files and providing you don't give it "write access" it's near as dammit reliable. The program is fully Falcon-compatible and also bundled is a serial port version for those among you who can't afford to give up your MIDI ports.



Simple and sweet, MX2Net has to be the cheapest networking package on the planet. Up to fourteen drives can be remotely controlled and provided you don't give the software write access, it's reasonably reliable.

SPEED FREAK

The most important aspect of any network is its operational speed. After all, if the connection is going to be significantly slower than a floppy disk drive you might as well save the money and opt for the disk swapping approach!

Communication speeds are measured in bits per second, or "baud". There are eight bits per byte and so 2,400 baud equates to a transfer speed of around 18 kilobytes per minute (trust me!).

The simplest way of connecting two STs directly is via the serial port which can happily handle up to 19,200 baud. This may sound fast, but in reality is under a quarter of the speed of your average floppy disk drive – not ideal when it comes to loading applications across a network! The next step up the ladder are the MIDI ports – these operate at a far more respectable 31,250 baud and with data compression approach the usable bracket.

But by far the best method of inter-ST communication is via the cartridge port. This is a totally different proposition altogether, because the ST treats this port as an extension to its RAM, making transfers in excess of 1,000,000 bits per second possible! The Falcon's LAN port, designed specifically for networking, is also naturally a fast option.

PROS AND CONS

Wallet-frighteningly cheap
Easy to install
Programming information supplied

Painfully slow
Some incompatibility

"A cheap, adequate system for transferring basic files, but inherently slow"

NAME: MX2NET
COMPANY: FLOPPYSHOP
CONTACT: 0224-586208
PRICE: £2.50

EASE OF USE	✪✪✪✪✪
DOCUMENTATION	✪✪✪✪✪
EFFECTIVENESS	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪

OVERALL 65%

ATARI ST REVIEW
ESSENTIAL BUY

POWER TO THE PEOPLE

Ladbroke's *PowerNet* package comes in three varieties: *DataNet*, for the ST cartridge port; *LanNet*, for the Falcon or TT SCC port; and *MIDINet*, which unsurprisingly makes use of the MIDI ports. All three flavours are happy to talk to each other and up to 64 machines can be connected to the network.

Setting up the *PowerNet* software is a total breeze – we are talking the best installation program this side of a Mac! It's fully GEM'ed with tons of on-line help along the way and almost does away with the need for a manual, which is just as well, because the supplied documentation is really nothing to write home about. Should you run into problems, diagnostic utilities are included to test the physical connections.

Once the installation process is complete it's just a case of rebooting your machine to install *PowerNet* and patiently praying for the new "N" icon to appear on your desktop – the network drive. Each node appears as a folder in this drive and by opening a node you can have access to any available devices on that machine – hard disk partitions, printer, modem and even a keyboard if you like! An accessory designed to redirect printer output to the network is included for applications not capable of printing to disk.

One exciting aspect of *PowerNet* is that you not only get a Network driver, but also a complete multi-tasking replacement for the ST's disk operating system, GEMDOS. Why exciting? Well for a start this makes *PowerNet* a true multi-tasking network in that other machines can access your peripherals transparently plus, as a bonus, the replacement is approximately 50% faster than the Atari version! This means that on a sufficiently fast machine, you won't even notice any network accesses to your machine, let alone have to stop working!

PowerNet also lives up to its name in its ability to allow any number of servers. Every machine can share its hard disk if you choose, and any devices or folders you don't want to share can be "masked" from the rest of the network. Machines lacking a hard disk can also choose to boot from a remote partition – very handy. The software remains stable throughout and the replacement DOS doesn't appear to cause any compatibility problems, even on the Falcon.

Speedwise, both *DataNet* and *LanNet* are well into the usable bracket, although the cartridge-based version, currently running at around 10 kilobytes per second, could be faster. Ladbroke are presently working on an improved model which should be available by the time you read this – version 2 reputedly uses a cacheing system to achieve transfer speeds of up to 50 kilobytes per second, but we'll just have to wait and see.

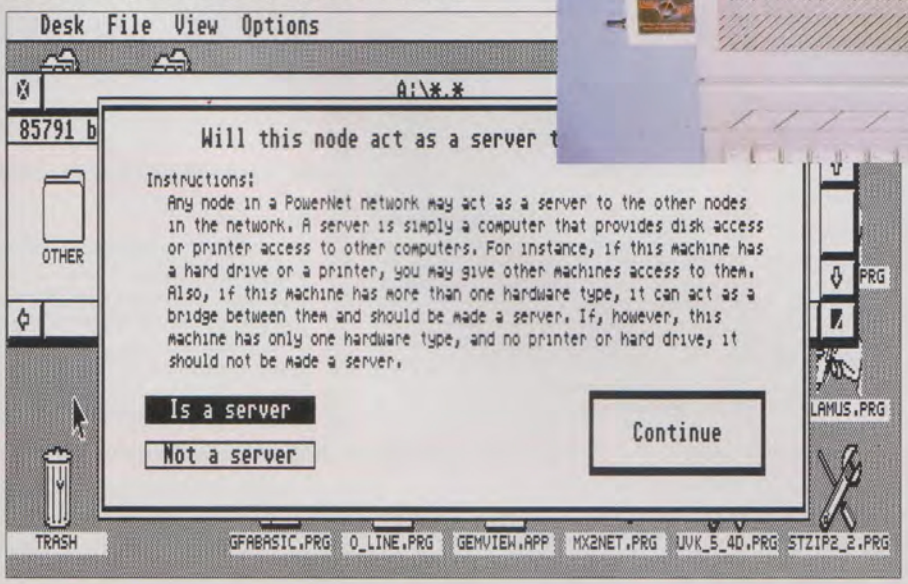
Obviously the software is severely limited in terms of speed if you use the MIDINet option, but it's adequate for relatively small data files. The Datanet cartridge is not compatible with the Falcon or TT, but this is not a major problem as, according to Atari, the current Falcon 030 is "the last in the ST range to have a ROM port".

PowerNet is without a doubt the best networking software for the ST – in fact, it should be sold with every machine! From the moment you run the installation program it screams style and above all it's reliable enough to be used in a business situation. The only drawback is the price, which, although understandable considering you get a complete GEMDOS replacement thrown in, is still perhaps a little too high for the average ST user.

Each PowerNet node is given a name and appears as a directory in drive N. Open a directory and you have direct access to all connected peripherals!

The DataNet device slots neatly into the ST's cartridge port, from where it can be linked to another sixty-three similarly equipped STs!

PowerNet's beautiful installation program does most of the work for you - just sit back and think up some original names for your machines!



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A broken mouse or joystick port means little or no control over your ST. Tony Kaye shows you how to replace one...

A STORM IN A PORT!

When Atari designed the STFM, they didn't exactly find the best place in the world to put the joystick and mouse ports. As anyone with an ST knows, they are situated underneath the machine which is fine if you have one mouse and one joystick and never swap them, but what if a game demands a joystick in port 0? Or you have a trackball or other device that needs to use one of the ports? The problem is that the ports don't take too much of a battering before they breakdown and start to give problems. The first sign is an intermittent failure of the mouse or joystick followed by complete failure.

The sensible answer is to invest a fiver or so on a pair of extension leads. Not only does this help prevent the problem, but it makes swapping a lot easier. However, if you've left it too late, then repairs may be in order.

Replacing a mouse or joystick port involves soldering skills and the ability to take the keyboard to pieces. It is recommended that you have this done by a professional unless you are very confident of your own abilities. The Step By Step guide shows how the job is done; it involves stripping the keyboard right down and is quite a delicate operation. If you do try it yourself, make sure that the kids are chained up in another room or you may end up with key clicks all over the floor!

Talking of key clicks, in an earlier issue of *ST Review*, I showed you how to replace these for new ones with a nice "feel" to them. If you were thinking about this upgrade, now is the time to do it as you need to strip the keyboard down to the same level for both jobs. Key clicks are available from the Atari Workshop at the special price of £24.95 (reduced from £29.95).

The mouse and joystick ports on the underside of the ST – badly positioned and awkward to get to.

STRIPING DOWN

The first job is to remove the top of the computer. Making sure that all leads have been removed, turn it over and undo the seven screws that hold the case together. These are the ones with square holes. Hold the machine the right way up and carefully remove the cover. You now have access to the keyboard which rests on the metal screen. There is one plug on the right under the keyboard which has to be removed and then the keyboard can be lifted off. Place the main body of the computer in a safe place.

Turn the keyboard over and you will see 28 small screws underneath plus two holding a retaining bracket over the mouse and joystick ports. Remove the bracket and all of the screws. Three of the screws are under a sticky plate that can be carefully lifted.

Now we get to the delicate part. Lift the circuit board (PCB) from the top of the keyboard. Always keep the keys face down at this stage. Some of the key clicks will come away and stay in position on the keys while others will stick to the board. Place them all in the holes at the base of the keys, making note of any blank spaces that already exist. At this point, if you have a replacement set of key clicks, you can install them. Put the keyboard somewhere safe, preferably using props at each end to stop the key clicks moving.

Now you can turn the PCB over and locate the position of the ports. It's probably a good idea to check both while you have the computer stripped down. Using a soldering iron and solder sucker, de-solder the nine pins on the underside of the port. Remove the old port, using a flat-bladed screwdriver if needed to prize the retaining clip from the board.

The new port will now slot straight back into the space. provided the pins are in line. Making sure that the port is flat against the board, re-solder the pins at the back. Repeat the procedure for the other port if necessary.

The job is now done. All that is left to do is to test the ports for integrity with a meter (or by CAREFULLY connecting everything up without the outer case and plugging it in), and reassemble your ST. As soon as you've finished, turn to page 42 or visit your local computer store and buy yourself a set of extension leads!

WORKSHOP PRICES

The Atari Workshop will repair the mouse port of your ST at a cost of £39.95. This includes strengthening the port to reduce the likelihood of any future problems. The Workshop can also supply you with the port on its own for the princely sum of £2.95. This represents a saving of £37 if you are able to do it yourself but beware; companies are likely to charge a lot more to rectify a bodged job than to do the repair from the beginning!

A set of mouse/joystick extension leads is available from our Readers Offers page (page 42) for just £5.95 a pair.

WARNING!

Removing the case of your ST will invalidate your warranty. It is not recommended that you try to do this yourself unless you are totally confident of your own abilities. In any event, *ST Review* cannot be held responsible for any problems arising from attempting this repair.

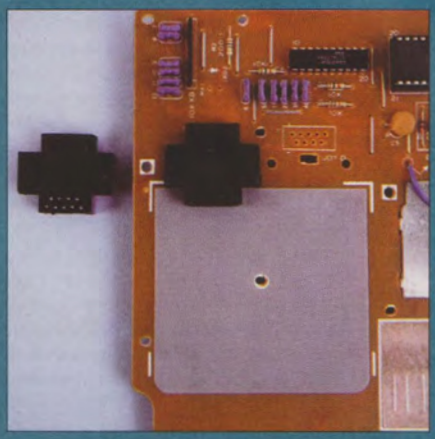
STEP BY STEP

Replacing a mouse port is not for the faint-hearted. Here's how to do it...

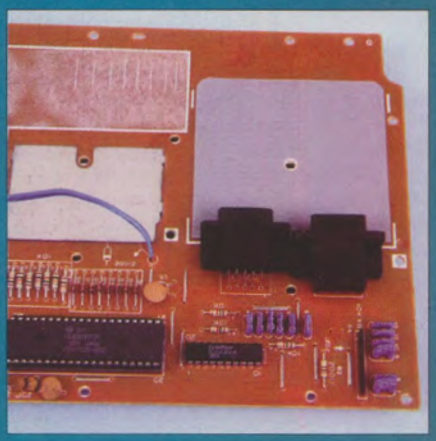
1 *Getting to the mouse port involves taking the outer case off of your ST and removing the keyboard. Undo the seven screws in square holes on the underside of the machine and lift the top off. Unplug the keyboard from the computer and lift it off. Place the rest of the computer to one side.*

2 *There are 28 small screws holding the keyboard together, as well as a bracket with two screws over the mouse ports. Undo all of these, keeping them in a safe place. Now lift the PCB from the keyboard, taking care not to lose any of the key clicks.*

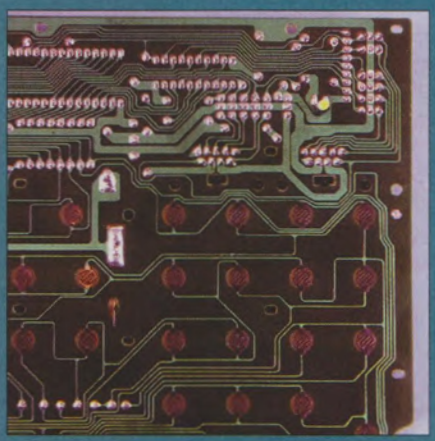
3 *Locate the port you want to change (the inner one is the mouse port) and heat up each connection with the soldering iron. Using the solder sucker, remove all the solder on the nine pins. Do not overheat the pins as this will transfer heat along the board and could damage other components.*



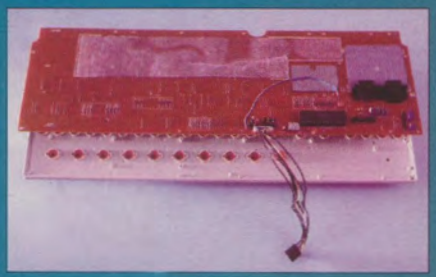
4 *You are now ready to remove the old port from the PCB. It may be necessary to use a small flat-bladed screwdriver to prize the clip out and release the component from the board.*



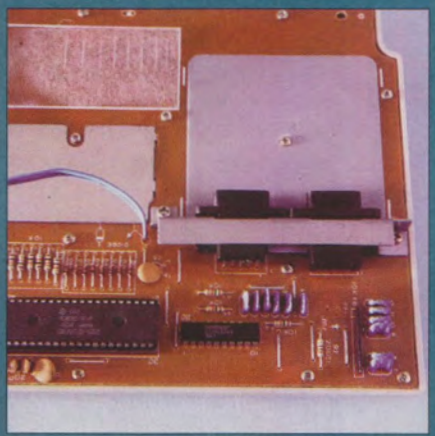
5 *Place the new port in position, making sure that the pins are straight. When you are certain that they are, press the port down until it clips on to the board.*



6 *Solder the pins on the back of the board, making sure that all of the connections are good and that there are no short circuits. The job is done and you can now start to put the keyboard back together.*



7 *Provided you have kept the keyboard in a safe place, all of the key clicks should be in the correct position. Place the PCB over the keyboard and make sure that the LEDs are straight and in line.*



8 *Replace the bracket and the two screws over the ports. The keyboard now drops back onto the ST and can be plugged in. Test the computer at this stage (keeping your fingers away from any parts!) and, if all is well, you can put the top part of the case back on.*

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TECH TALK

Why are Atari computers so successful in Germany?

ST owners cannot ignore the fact that most high quality programs for the ST originate in Germany. Products like *Cubase* and *Calamus*, to name just two, do not only hold a major share of the market, they also set the standards for others to follow in terms of features, quality and user interface. This is also reflected in the PD and shareware scene, where the number of German programs is overwhelming.

The situation in the UK is a complete contrast. While there are several companies producing high quality software (such as HiSoft and GST), the majority of ST programs created in the UK are games. This does not mean poorer quality, as some would argue that there is as much skill in writing a game as creating a 'serious' application.

The Germans, it seems, took an immediate liking to the Motorola 680x0, which as you probably know is the 'brains' of our beloved ST. 68000 programming is taught in German universities and colleges, while the rest of the world seems obsessed with the inferior but popular Intel 80x86 series as used on PC-compatibles. As a result, many German students bought the ST because it is based on the Motorola chip, and is relatively cheap when compared with Apple Macs or Sun workstations which are also 680x0 machines.

Most people tend to stay with their first computer, and so most German students that used an ST through college started to write commercial applications for it. This factor was also coupled with well organised marketing by Atari Germany who offered special discounts to educational authorities.

Now that the Falcons are finally landing, the picture is even clearer. Most German programmers are very enthusiastic about the new machine. There are already dozens of PD and shareware programs specifically for the Falcon. Steinberg are about to release *Cubase Audio*, EMagic are working hard on *Notator Logic Audio*, Compo have already released *MUSiCOM* and the list of other German products is lengthy. In the UK, with the notable exception of HiSoft and perhaps D2D Systems, not much is happening.

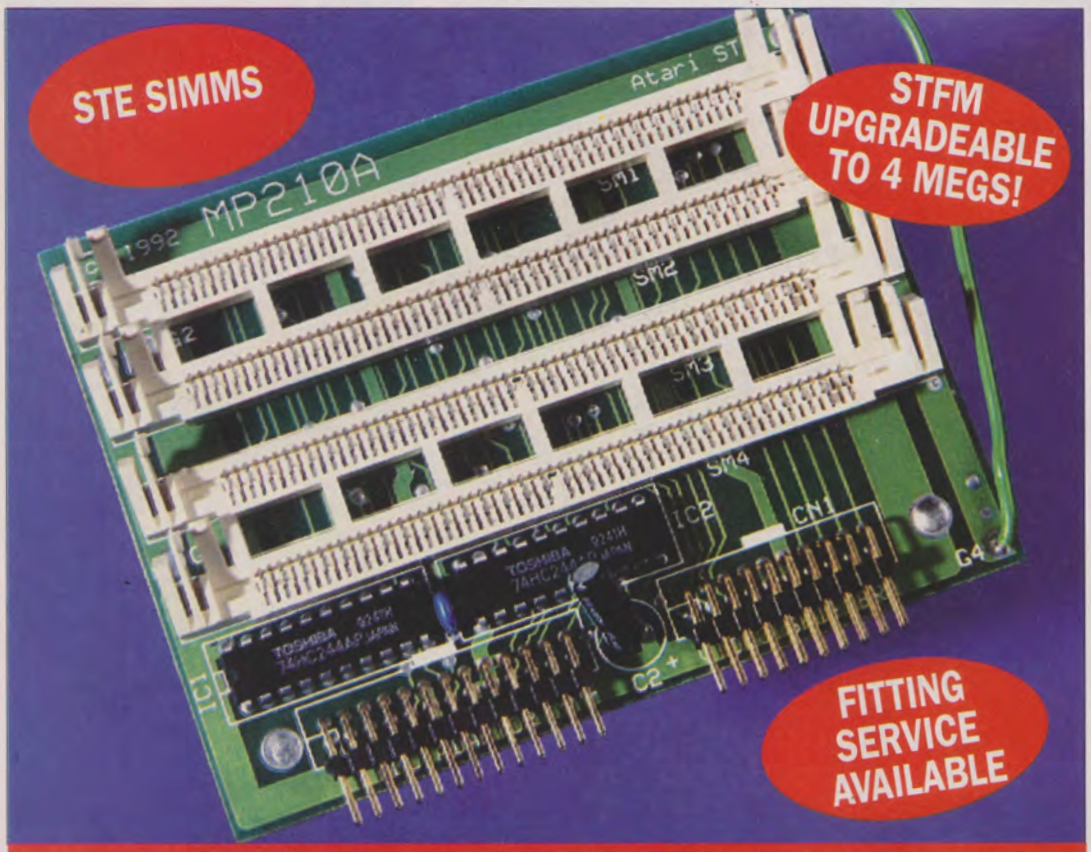
Maybe it's time to look at the German success story and to realise that the ST is not just a games machine – it's a versatile, all-purpose home computer. It is far more efficient than the competition and cheaper as well. Many German companies have built their success on the ST, and they only produce 'serious' software, not games. I am sure that this success can be matched here in the UK. Any takers out there?

Ofir Gal is one of the UK's foremost ST experts, specialising in technical areas such as programming and music. He is the author of various ST programs, both commercial and shareware, and keeps typical programmer hours which means that he can never be contacted before three in the afternoon!

We've scoured the ST world to bring you products you're likely to need at prices that won't break the bank...

WHAT'S

INCREASE YOUR MEMORY!



1 MEGABYTE UPGRADES FROM £9.99

The *ST Review* campaign to get every owner of a 520 ST to upgrade to 1MB enters a new phase this month. We need all our readers to upgrade to 1MB so that we can continue to bring you the very best cover disks possible, and that means software that needs 1MB. Thousands of you have upgraded yourselves, now for our readers who don't want to open there computer we are offering to do it for you!

Fitting an upgrade yourself to an STE is very easy and costs just £9.99 including p&p. An STF/FM is a little more difficult – check our step by step guide in issue 14 – but most people have no problem and it costs £34.99 including p&p for a board that's upgradeable to 4MB later using standard SIMMs memory.

If you don't want to open your computer then let us do it for you! Prices including overnight courier to return your computer to you are £22.99 for an STE or from £39.99 for an STF/FM.

If you want us to fit your memory upgrade you must telephone our order hotline for more details and to arrange to book your computer in.

Our fitting service offer closes on August 31, 1993.

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At *ST Review*, every care is taken to bring you the highest quality products at the lowest prices. We don't just offer you anything we can lay our hands on the products are carefully selected and we ensure that they are practical, handy and actually enhance your computer. Everything we sell is fully supported – help is just a phone call away.

KEEPING TRACK OF TIME

ATARI ST ESSENTIAL BU

UPDATE YOUR ST SYSTEM CLOCK AUTOMATICALLY!

The problem with the internal clock in the ST is that it forgets the time when you switch off!

This little device plugs into the cartridge port and remembers to tell the computer the correct time when you switch on by using a small AUTO folder program. Given an essential buy award in an earlier issue of *ST Review*, this is an offer you cannot refuse!! Available with or without a throughport to connect other cartridges to your computer.

ON OFFER?

MOUSE/JOYSTICK EXTENSIONS

The mouse and joystick ports on the ST could well have been designed by the same person who invented the Reliant Robin! Continuous swapping of joysticks and mice eventually damages the ports. Cost of repair? You don't want to find out! Save yourself the hassle – buy an extension lead for just £3.99!

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THROUGH THE KEYHOLE

Tony Kaye zooms off to Nottingham to meet the faces behind the ST Club...

The ST Club is based in a very unassuming building in the heart of Nottingham.

I knew I was in for a hard time when I drove into Nottingham. While most large towns have signs around telling you which radio station to listen to for travel information, Nottingham has signs pointing you to parking spaces! Four circuits of the city later...

The ST Club is situated in a fairly pleasant pedestrian street in the middle of Maid Marion's favourite haunt. Head of the company is Paul Glover who, with his wife, Nicky, keeps a tight rein on the running of the three parts of the company. "Three?" I hear you say, "I thought they were a PD library!" Well, yes they are, but they also market commercial software and produce a monthly magazine, *ST Applications*.

So how did the business start? In 1986, Paul was at University and needed a computer. After surveying the market, the ST, with its promise of applications that would push it into the "Jackintosh" arena, stood out as the machine to buy. A Mac at that time would have cost in excess of £2,500 while the ST was priced at under £600.

The need to communicate and meet with other owners caused Paul to start the ST Club and produce a monthly newsletter promoting a Public Domain library. He carried on with the library on a part-time basis until the trade was large enough to support him full-time. Currently sporting around 1,500 disks, the library is due to be reduced shortly as the single-sided disks are pruned out due to lack of support. Future plans include more Falcon PD and supporting high-density disks.

Paul Glover at the helm – note that he still uses a standard ST mouse...

ST APPLICATIONS

Since 1990, it has been possible to buy an ST magazine devoted totally to the serious end of the Atari market. Produced monthly, this was a natural progression from the newsletter and readership has grown to over 4,000. *ST Applications* has an emphasis on DTP and while this wasn't intentional, don't expect to find any game reviews! Paul doesn't see *ST Applications* as ever becoming a threat to the "glossies", although it does fill the gap left by the now defunct *ST World*, the serious user's "bible" at one time.

The magazine is designed using *Timeworks Publisher 2* with some help from *PageStream 2.2* and *CompoScript*. Text is prepared using *Redacteur 3* and the final output is via a HP DeskJet Plus. Many of *ST Reviews*'s authors also write for *ST Applications* including Ofir Gal, Andrew Wright, Mark Baines,

A bank of STs helps Gwen to duplicate all of the ST Club's disks.

An impressive filing system helps Nicky to keep the accounts up to date.

NEW PRODUCTS

Two new utilities are now available from the ST Club; *Imagecopy 2* and *View II*.

Imagecopy 2 is an updated and completely revamped version of its predecessors with the ability to handle picture files in virtually any format and convert them from one to another. Colour printing is supported, output to 10 different printers in five resolutions is possible as is file saving in any of six formats. *Imagecopy 2* was written by Jeremy Hughes and works on all STs including the Falcon. For a full review, turn to page 22.

View II is a must if you need to view files quickly. The original *View* was on our February 1993 (issue 10) cover disk, but the latest version is a full commercial package that has been vastly improved. By simply double clicking on a file, you can view virtually any picture, play .AVR sound samples and read text files.

A very useful feature is the ability to expand .ARC and .LZH archive files. A double-click gives you a list of the contents of the file; click on the ones you want to extract and *View II* does the rest. *View II* is expected to sell for £14.95 – full review next month.

An .IMG file of a tiger on view, showing some of the options.

A compressed Degas file displayed by Imagecopy 2.

Paul Keller and even Vic Lennard. Paul is quite pleased to have writers actually "cutting their teeth" in his magazine.

SOFTWARE

There is a natural progression from PD to commercial software. It's a sad fact of life that most people have shareware in their collection and use it regularly, but few actually PAY for it! When Jeremy Hughes wrote the first version of *Fontkit*, he received just five pounds from users which meant that a lot of people were using it but not paying. Jeremy approached the ST Club to market the next version of the program as a commercial product. This decision has led to several other titles being sold through the ST Club including the excellent *Imagecopy* series and system enhancement programs like *Multiprint* and *Mouse Tricks*.

Programs distributed by the ST Club are full commercial titles without the overheads and profit margins claimed by some of the larger software houses. Manuals and packaging are adequate without being flamboyant and the software is practical. With current titles such as *Imagecopy 2*, *View II* and *Universal Item Selector III*, who can disagree?

BACKUP

Behind the scenes lies a hard-working team. Nicky Glover, Paul's wife, is responsible for administration, accounts and generally running the office. She also helps with editing the magazine and describes herself as a "proofer, *par excellence*!" Products are put together and orders processed by Gwen and Margaret, the order processing system having been streamlined so that most orders are actually sent out on the same day they arrive. While I was there, the answerphone had to be switched on so that they could get some work done so if you try to ring the ST Club and get the answerphone, don't give up!

The order processing and accounts system was written by Paul himself using STs. Software is courtesy of *Superbase Professional* and is run on a couple of ageing Mega STs. Programs are duplicated on a series of STs, using *FastCopy Pro*.

David Smith is the other member of the team. Working from home and holding the title of art editor, he's responsible for the layout of *ST Applications*.

WHAT IS WORTH SELLING?

I asked Paul what advice he'd give to a new author.

"The first thing to do is to show it to as many people as possible to find out if it's worth selling" he said. "Find out how much they'd be prepared to pay for it and whether you are doing it to make money or just for the programming experience. After doing this, you can then decide which way to go."

Once you've decided to release your title as shareware, Paul feels that the best way to encourage users to pay is to offer the latest fully-working version of the program on registration, maybe disabling some important features from the version released through the PD libraries. This means that anyone who wants to use your program to the full has to register.

THE FUTURE?

"We keep our options open," says Paul. "If Atari stopped selling the ST range tomorrow, we'd still be in business in a year's time. People still have machines that need supporting, although most of our sales seem to go to owners who have had their machines for six months or less, so eventually sales would diminish. However, Falcon PD is starting to become available, and other formats such as Macintosh or PC are possible.

"The Falcon needs to be able to run mainstream applications to succeed. You don't have a lot of choice if you want to run an accounts package, for example."

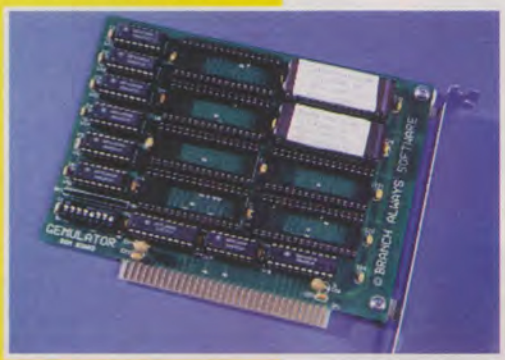
Perhaps the latter comment could be taken to mean that Atari must recognise the importance of PC emulation to have a world-beating machine. The Falcon's innate features make it a worthwhile addition to the home, but an emulator would place standard software within reach of potential business purchasers.

THE GEMULATOR

The GEMulator is an emulator with a difference. It fits into a PC and, using Windows, can emulate up to three STs.

There is no MIDI support or serial port for comms, but the GEMulator will run most applications and some games. The half-size PC card comes with one set of TOS 2.06 ROMs and there is space for a further two sets. A 486SX25 PC will give a 20% speed improvement over a standard STE. Retail price is £195.

It is possible to run the Spectre GCR Macintosh emulator as well, giving the best of all three worlds in one box! Watch out for a full review of the GEMulator in a future issue.



Does this look like three STs to you?

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ANALOGIC
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ANALOGIC

How does a credible songwriter end up writing a Eurovision hit, and where does the ST fit in?

THE RED DEVIL...

Where most people have a lounge, Red has a recording studio – and a sizeable one at that. The sound that hit me as I walked into the room seemed a lifetime away from the style of Sonia's recent Eurovision hit, *Better The Devil You Know*.

So how did he get involved in music? "My father was musical and there was always a piano in the house. I went to Music College at 19, but didn't do any of the lessons – I'd lock myself in a room with a piano and just write songs. I left after a year.

"From twenty onwards, I played live in and around England. I always did something to stay in the business whether it was engineering or a bit of drum programming. You have to make a conscious choice; do you want a stable life with a regular income or are you prepared to waive all of that and stick by your music? I chose the latter."

Red – from a pop tunesmith to a credible songwriter despite penning 'Better The Devil You Know'...

So what's the low-down behind Sonia's Eurovision entry? "I was engineering at a studio and met Dean Collinson," said Red. "I liked the guy's enthusiasm, got together with him and wrote a song called *Heaven Knows* from a backing track he'd recorded. He also had a title called *Better The Devil You Know* but there wasn't really much of a tune so I just said "give me some time". I mulled it over in my head, started playing bop chords and shuffle beats and came up with the tune."

Bearing in mind that this was over five years ago, how did it end up being entered for the Eurovision? "I signed around 45 songs to Virgin Publishing about four years ago, the product of me very much trying to be a songwriter for a band called *Blue*. Virgin were bought out by EMI, Dean subsequently took a solo career in a pop vein and the song was submitted for the Eurovision because Dean was credited as part-writer of the song. The British public did the rest."

ENTER THE ST

As a songwriter who initially composed on a guitar, how did you start using an ST? "I bought one with the money from Virgin," explained Red. "I was determined to become a professional songwriter.

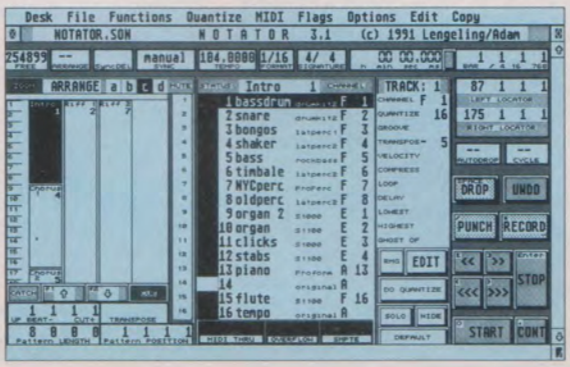
"The ST was my first computer, because of its simplicity. It's the most commonly used computer in music – you can travel from studio to studio and send mixes out to different friends. It makes sense to me to work on a computer that is widely distributed. Some may be more reliable and aimed at the professional market, but I don't want to look at a screen the size of a CD...

Which programs do you use? "I started off with EMagic *Notator* and moved on to *Cubase* for a year or so and then came back to *Notator* via *Music-X* on the Amiga. The computer has to be invisible when I'm recording and I find with the Atari that I'm not thinking about it – I'm just playing and it's doing its job. *Notator* is the fastest sequencer to get an idea down with. Songwriting in its essence requires speed – if I have to stop each time I have a melody, it's gone. I have to get the idea and melody recorded immediately.

"I don't use the ST for anything else. In fact, I try to know as little about the computer as possible as the more I know, the less songwriting I'll do. It's just another tool with the sole purpose of helping me to create music."

And so to the present. "In the last year, I've been working up to 60 hours non-stop. The product of this is a sound and a style of music that is mine with an album titled "The Lord Made The Sun, The Moon And The Stars", a combination of electronic and acoustic songs."I've been approached by a lot of publishers and record companies throughout the world to write for them, make records and produce. I haven't actually taken any of the companies up because you have to sign the right deal."

Any advice for any budding musicians reading this? "If anyone asked me should they follow a career in music as a songwriter or a professional musician, my first answer would be "absolutely not" – find a different career. But if you want your life to be completely up in the air one minute and down on the ground the next, then this is the business to do it in..."



EMagic Notator, an excellent integrated sequencing and scoring program for musicians who like working with patterns.

WHICH COMPUTER?

Red's current equipment is a 1040 STFM with TOS 1.02 and the memory upgraded to 4 MB. As the EMagic *Notator* program only runs in hi-res, an SM144 mono monitor is used and there is also an EMagic Unitor plugged into the cartridge port to expand the MIDI capability of the ST. Even the mouse is an original...

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Worried that your MIDI setup lacks soul? Ian Masterson makes friends with a program that knows how to groove...

PARTNER FOR LIFE

I confess – I'm a musical snob. I've always equated auto-accompaniment software with those single-finger chord arrangements found on home organs. Perhaps it's best to think of them as a form of one-man band, whose role is to provide a sympathetic musical backing to any melody you might desire to perform on your MIDI-equipped keyboard. Generally, the software lets you input the chord structure of your piece over a number of bars, and then proceeds to translate that information into a style of accompaniment chosen by you. The computer kicks off with its "MIDI backing tape" and you play over the top.

Who uses them? Such packages have been the domain of those who rely on home-keyboard style accompaniments to beef up their playing. However, the current generation of products offer far more than an easy way to get your ST to play samba and swing.

Keyboard players are using such programs as rehearsal aids, composition and improvisation tools, idea sketchpads and so on.

MORE THAN LIFT MUSIC

Session Partner is not a sequencer and will only allow you to modify and experiment with the accompaniment parts to a certain extent. However, beyond these basic limitations it's one hell of a powerful piece of software. The main feature of the program is its ability to generate seemingly infinite variations on any chosen style. A secondary program, *Backing Partner*, will recognise any chords played into the ST over MIDI and adapt the backing accordingly. Incidentally, the program is copy-protected – a dongle for the ST's joystick port is provided.

While the visual interface used by the program should present no difficulties, it's worth noting that the graphics have been programmed extremely well, with all the various icons carrying amusingly detailed images of their functions. My only beef concerns the dubious humour on the Cancel/Confirm buttons – replacing *yes* and *no* with *super!* or *wonderful!/outta here!* is a joke that wears thin after a while. The manual supplied with the review copy of *Session Partner* was very much a preliminary affair – it was rushed to us in the form of an ASCII file on disk, and proved to be an amusing translation of the German original. Although it was possible to interpret the basics of the program, the final printed version needs to be heavily revised.

Session Partner's main screen is both pleasing to the eye and easy to operate.

The main screen is divided into several banks of functions. The top left corner houses the global parameters that affect the entire song – tempo, key, 'swing' factor, time signature and style, all of which are self-explanatory. On the right resides a box housing the Song Table that allows you to chain together the various 'parts' of a song that you create on the main body of the screen.

BARS, PARTS AND TABLES

Session Partner groups together a series of musical bars into a part. For example, you might have a four-bar intro to your song forming one part, followed by six and four-bar parts for the verse and bridge respectively. Each part can hold a maximum of 96 individual beats, which *Session Partner* irritatingly refers to as 'ticks'.

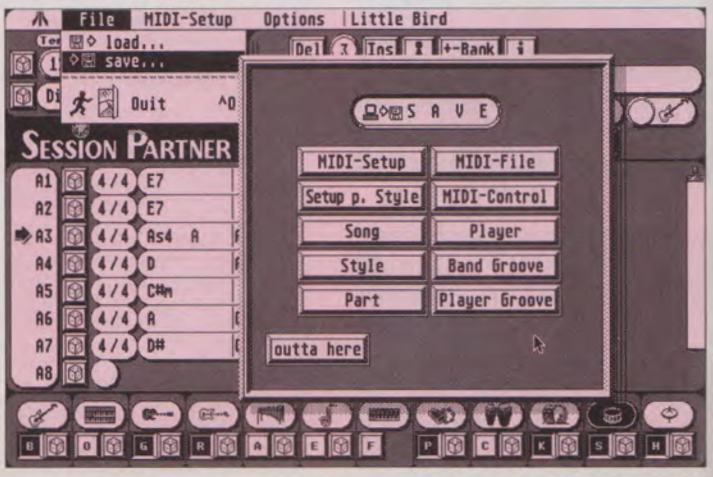
There can be up to 16 parts in memory at any one time, stored in two banks of eight, A1 – A8 and B1 – B8. You select the order in which you want the parts to play by chaining them together in the Song Table; for example, A1 can be your intro, followed by A2 as the verse, A3 as the chorus and ending with A2 again (fills to link the sections can also be programmed in). Parts can be copied across the program to a clipboard

INSIDE INFO

ENTERING YOUR CHORDS

Entering chords into a part on *Session Partner* couldn't be easier. Clicking on the part in the main screen brings up a box with all the details you need carefully set out inside. From here, you can specify the length of the part in bars, save it to disk (or load an existing part) and set the resolution (or snap) in which you want to edit. For example, you might want to enter chords on every fourth beat and so the snap should be set to 1/4.

Pointing at a position in the part calls up a little speech bubble, in which you enter the pitch and type of chord you want from two lists. Thus you can enter "D" for the pitch, followed by "suspended fourth" for the type. Every kind of chord you might need is listed, so something can be chosen to suit your particular arrangement in the best way possible. Interestingly, you can also specify a different, harmonising chord for the bass part – for example, you might keep the root note in C while the melody changes to F.



The program lets you save almost any individual aspect of your arrangement, be it a part, groove or chord structure.

Session Partner's alter ego, Backing Partner, alters the accompaniment according to the chords you play on your keyboard.

buffer or into brand new positions altogether, making it easy to repeat a particular chord structure before changing it slightly – fast and intuitive.

INSTRUMENTS

Along the bottom of the main page are symbols for each of the individual instruments in the MIDI 'band': bass, organ, lead guitar, rhythm guitar and so on. Each has its own set of parameters which can be accessed via the MIDI setup function on the Options menu and the setups can be saved on their own or with a song. *Session Partner* comes with several setups for various synths – it certainly worked well with a Boss Dr Synth module.

Further parameters can be accessed by clicking on the instrument itself, letting you edit the actual style of performance. One very powerful function is the ability to alter "tone density" across different lengths of notes to create phrasing and accent effects for a realistic instrument sound. The various densities can be set by "drawing" them on a graph, and if you're willing to spend some time getting to grips with this, you'll begin to realise how musical *Session Partner* can be.

Several sets of "dice" icons are scattered across the screen. Hitting one of these instructs the program to pick a random value for whichever parameter the dice appears next to. For example, tempo dice generates a new speed for the song while band dice generates a new arrangement of instruments. Perhaps the most useful dice functions are found next to each of the instruments at the bottom of the page – if you don't like the current rhythm guitar riff, hit the button and something entirely new takes its place. Simple, clever and highly effective when it comes to discovering fresh grooves for your song. With *Session Partner*, it's practically impossible to get stuck in a musical rut.

The randomising elements actually make *Session Partner* the powerful compositional tool it is. You can take an entirely fresh page with no arrangements or parts on it, click on Start and the program throws all its dice and generates eight parts with chord structures, grooves and instrumentation ready for you to hear. At least one part will set your creative juices flowing and you can then save whatever you like as a MIDI Song file and import it into your sequencer for further work. Alternatively, you can save the whole as a complete song, and come back to it later. As a fountain of ideas, this program is hot.

VERDICT

If you find some of this hard to visualise, check out the step-by-step which takes you through the entering of a song. *Session Partner* is a deceptively simple program to operate but somehow manages to come up with pretty amazing results. This isn't a replacement for auto-accompaniment – it's an entirely new approach to producing music with your ST. If you want to get creative, get *Session Partner*. It's a little expensive, but seriously addictive and it could signal the start of a beautiful friendship...

Newtronic are currently running a special introductory offer. Until July 31, 1993, you can trade in any of your auto-accompaniment programs for a £50 discount off *Session Partner* which will then be yours for the princely sum of just £99. The program you're trading in must be a complete, original package.

Incredibly easy to use
Capable of astounding results

PROS AND CONS

A little pricey
Hi-res only
Dodgy humour!

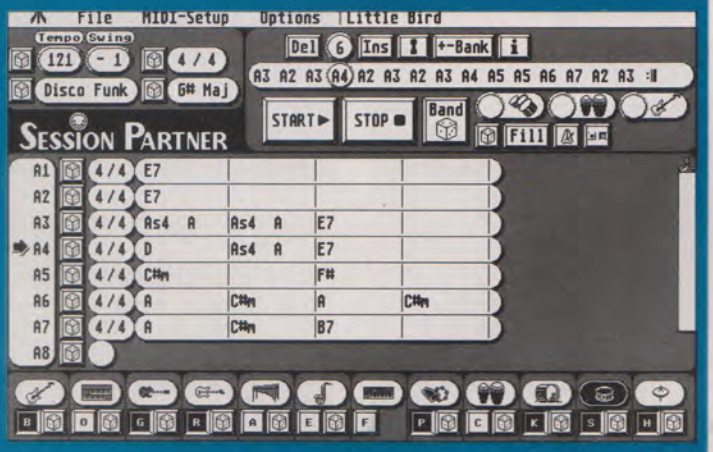
STEP BY STEP

1 *This part of the Options Menu lets you alter your MIDI instruments to suit your arrangement. Here, we're changing the voice of the rhythm guitar in order to program an arrangement of Annie Lennox's "Little Bird".*

2 *Clicking on an individual part calls up this window, which allows you to enter your chord structure according to the section of the song. This is the bridge.*

3 *Having completed our chord structures, we now turn to editing the performance characteristics of the individual instruments, in terms of syncopation and dynamics. Clever, eh?*

4 *Yet another aspect of instrument editing – the graph that lets you draw in phrasing and character.*



5 *That's it – the final song ready to be played back. Probably not quite how producer Trevor Horn envisaged it, but close!*

"Session Partner is a simple, clever and highly effective musical program"

NAME: SESSION PARTNER
COMPANY: NEWTRONIC
CONTACT: 081-691 1087
PRICE: £149
MIN MEMORY: 1MB

EASE OF USE ✪✪✪✪✪
DOCUMENTATION ✪✪✪✪✪
EFFECTIVENESS ✪✪✪✪✪
VALUE FOR MONEY ✪✪✪✪✪

OVERALL 88%

Kawai go for world domination with their new General MIDI sound module...

Nicely laid out front panel with an easy-to-use data wheel.

GMEGALOMANIA!

If you want to use your Atari for music, you'll need a little black box to make the noises. Buying a General MIDI Sound Source makes exchanging songwriting ideas with your friends an easy job, because General MIDI is an agreed way of mapping out the sounds on a synthesiser or sound module.

The Kawai GMega Synthesiser Module comes in a neat little box with only 6 buttons and a round dial on the front panel to accompany the display, a mini headphone socket and volume knob. The GMega is rare in that it offers two MIDI inputs, giving access to 32 MIDI channels from one tiny unit. It has a built in digital reverb with a different level of effect available for each channel.

Along with 32 channels, the GMega also has 32 voices but as many of the best sounds use two voices, you end up with between 16 and 32 actual notes. Indeed, it seems that the GMega bites off a little more than it can chew in this department. Having two MIDI Ins should allow you to simultaneously play notes on 32 MIDI Channels, but playing a fairly complex song showed that the timing suffered badly – not good if you are working on a funky dance track with lots of percussion.

On a general level the GMega performs fairly well, but there are a few strange shortcomings. Although the level of effects can be varied for all the different channels, the choice is simply 'Hi' and 'Lo' with the former giving too much reverb and the latter not enough! The actual values of 'Hi' and 'Lo' have master settings, but this still doesn't work well in practice.

The sounds themselves are perhaps a little thin, and the GMega lacks a chorus effect as found on the Roland units. This adds warmth and movement to the most dull of sounds by simulating the effect of several sounds playing together – why Kawai chose to leave this out is a mystery.

Good points? Having 32 channels available means that each track of your sequencer can be used for just one instrument or sound. This is much simpler than using Program Changes (changes in sound) halfway through the song. As long as your song's arrangement isn't cluttered by too many big chords, there are lots of channels left to add interesting harmony lines to the mix. Also, many of the more synth-ish sounds are better than those found on rival units. The drum sounds are individual in character, but still punchy, and the cymbals are excellent. Where the GMega really scores over the opposition is in the ability to store a whole bank of User Sounds; a clever use of this would be to keep the sounds in their General MIDI locations, but edit the ones you don't like and replace them with your own totally brilliant versions. This gives you a GM-compatible module with custom sounds. Clever, eh?

Editing is a doddle. A few button pushes and a quick spin of the dial will get you to any parameter. You can easily change the saxophone into a sort of, er, underwater goat's fart if you so desire...

The manual? It's wonderfully written in comparison to the usual Japan-English offering. Let's face it – there's no point in having the world's best sound module at your fingertips if you can't figure out how to use it! It's well laid out and even explains what the various sound editing features do in layman's terms.

VERDICT

Great in concept but less than perfect in reality due to the timing delays. That said, it's ideal for a songwriter or classical musician who need lots of individual channels to try out different arrangements of a score. A good contender, but not an outright winner for Kawai...

INSIDE INFO

You're spoilt for possible alternatives. There's the Yamaha TG-100 (£379) which has 192 sounds, reverb and 28-note polyphony, while Roland have a host of units using their 'Sound Canvas' sound chip, including the SC-55 (£699) and SC-33 (£449), the main difference between these being the number of sounds.

Both have chorus/reverb effects and a set of audio inputs for another sound source so saving you the hassle of using a mixer.

However, none of the above has a complete bank of User Sounds, a strong plus point for the GMega.

The two MIDI Ins give you access to 32 simultaneous instruments...

PROS AND CONS

32 voices and channels
Easy to edit
A bank of user sounds

Dodgy timing under stress!
Awkward Effects level control
No chorus

"Good module with 32 channels and lots of user sounds, but timing suffers if pushed"

NAME: GMEGA
COMPANY: KAWAI
CONTACT: 0202 296629
PRICE: £649

EASE OF USE ✪✪✪✪✪
DOCUMENTATION ✪✪✪✪✪
EFFECTIVENESS ✪✪✪✪✪
VALUE FOR MONEY ✪✪✪✪✪

OVERALL 80%

We wondered how the various MIDI song file companies respond to requests for a demo disk. So we asked them...

PLAYBACK!

First impressions count for a lot, and a look at a company's demonstration product will usually dictate whether you buy from them or not. In the case of MIDI song files, you're obviously going to get a disk and the songs are usually truncated versions of the final products or specially arranged editions.

The documents that come with the disk also point to how carefully a company ensures that you can get the best out of their product quickly.

With over a dozen General MIDI sound modules now available, song file companies generally ensure that their titles can be played immediately on such a device. Most also include set up data for the popular Roland Sound Canvas range of synths.

We called four of the main companies, of whom three replied with their standard demo package within a couple of days. How did they fare?

HANDS ON MIDI SOFTWARE

Hands On run a scheme of not giving away a demo disk – you pay £5.95 but get a refund against your first full purchase. Included with the disk is a full products catalogue and an update list with an additional 113 titles. Unfortunately, no data sheet is included for the songs on the demo disk although the inside front cover of the catalogue clearly explains the different kinds of file you can expect to find on a typical disk. These include various text files with the song structure, lyrics and instrument info.

The demo disk contains over 25 minutes of song data with the beginnings of 20 commercial songs plus a full non-commercial demo from Kevin Earley. All songs are set up for Roland's GS format, including the necessary System Exclusive data at the start of a song, and Program Changes are always on a separate track making it a doddle to assign sounds from non-General MIDI modules.

General performance quality is good but a little staid and lacking in feel. Some songs simply have too many instruments so making the overall mix rather cluttered and the overuse of reverb often gives a 'muddy' result. That said, the recordings are very accurate – and the *Thunderbirds* theme is outstanding...

Cost is £18.75 for a minimum three titles and £5.95 per additional song – contact 0705 221162.

PROTRACKS

The demo package for Protracks is rather impressive. It contains a letter explaining who they are, a full catalogue of titles and two separate sheets carefully detailing information about the 12 songs on the demo disk.

You have the option of listening to the whole demo as a single performance, with titles fading out and in, or as individual songs. Nice idea this, as it allows you to lean back and listen to the 15 minute demonstration without having to worry about any button pressing.

These guys certainly know their big band arrangements, but the poppier titles tend to sound rather old-fashioned with the levels of instruments generally being poorly mixed. Brass arrangements and guitar strums are just too tight – they sound like they're coming from a computer! On the technical side, the drum track is towards the bottom of the list which causes timing inaccuracies in the rhythm playback on some songs, and the programmer has missed out one or two important default events at the beginning of each track.

Cost is £30 for five titles – contact 081-763 2225.

HEAVENLY MUSIC

The standard Heavenly package consists of a listing of their "Megga" Tracks, an order form and a demo disk containing over fourteen minutes of segments from a dozen songs. While the paperwork is the least impressive of the three companies, it's adequate.

The moment you hear the first demo, you want to listen to them all. The brass and string arrangements are superb, especially on the old Earth, Wind and Fire hit, *September*, and the whole kaboodle can be described in one word – feel. While the songs may not be note accurate, it's clear that they have been programmed by a performing musician – just check out the harp at the beginning of *Boogie Nights*! Solos are excellent, especially in the way that pitch bend and modulation has been applied, and the use of tempo changes is impressive. And not only do the songs sound good – the actual MIDI data has been well programmed with all necessary set up information included at the start of each track.

Cost is £6 per title – contact 0255 434217.

VERDICT

Don't take our word for it – contact the libraries and hear the demo disks for yourself. If you disagree with our conclusions, please drop a line to *MIDI Monthly* at the usual *ST Review* address...

Most MIDI song file companies include set up data for the Roland GS synths

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SCREEN SCENE

Games to suit every taste and budget – all in Screen Scene this month...

GAMEPLAY

SUPER CAULDRON 56
Help the witch collect spells and then head for the haunted castle to try and defeat the evil sorcerer in this platform romp from Titus.

ISHAR – LEGEND OF THE FORTRESS 58
The first of two Falcon adventures. Gather a band of travellers and save the kingdom in this massive Silmarils adventure.

TRANSARCTICA 59
Back to the future to play train sets in another Falcon release from Silmarils. This time, the mission is to restore the sun after a nuclear winter.

AIR SUPPORT 61
Futuristic plane-spotting! Train to be a pilot at West Point Military Academy in the world of tomorrow.

VFM

CRYSTALS OF ARBOREA 64
See what you think of the game that led to *Ishar*...

SWAP 64
If puzzle games are for you, check out this tile-swapping game from Fox Hits.

PREHISTORIK 64
Stone-age fun with the T-Bone tribe in this platform game set in the days of yore...

PD SCENE

FRESH FROM PUBLIC DOMAIN LIBRARIES...

PLOP

MURDER ON THE ORION EXPRESS

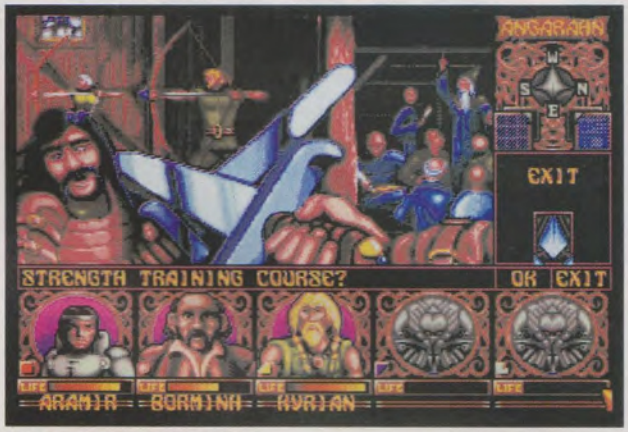
WORLD FIGHTING CHAMPIONSHIP

BIO-HAZARD

CURSE OF AZRIEL

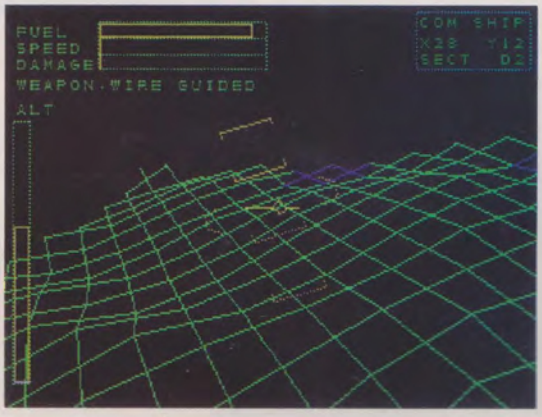
HAMMER TO FALL

Up, up and away with Super Cauldron!



Super colour and sound with the Falcon version of Ishar...

... and likewise for Silmarils' Transarctica!



Avoid hitting the ground if you want to live long enough to become a qualified pilot in Air Support...

GAME PLAY

SUPER CAULDRON

Stu Redman polishes his smashing utensils and cooks us up a lovely stew in the Super Cauldron...

Switch on the television news at any given time of day and the chances are you will immediately witness scenes of carnage or violence in some Eastern Bloc state or South African city. Turn to the newspaper, and between reports of prominent members of the monarchy supposedly practising illicit affairs with old school chums, you'll find similar images to those on the TV screen – broken into tiny dots which make pixels look gargantuan – immortalised in black and white print, but remembered by most only until the next day, when fresher images take centre stage.

The media makes the news, yet at the same time the media reflects the news, in that while crime and violence spiral, so too do the number of angry, bloody films, comic books, TV shows and, yes – computer games.

Streetfighter 2 on your very own ST has a very simple aim: beat senseless as many opponents as possible and walk away in glory; *Desert Strike* across the formats sees us control a military gunship as we hunt and kill a thinly disguised Saddam substitute, and the number of graphic adventures depicting or portraying the dismemberment of various nightmarish beasts is endless.

It is perhaps surprising then, that amid such inclemency of opinions, actions and stimuli, games such as *Super Cauldron* survive. Small and lovable creatures rushing through a mythical landscape with an all-important target – usually the destruction of a mighty evil or the collection of vital talisman parts – to achieve, are presented to us in some form or other every month.

Potions always come in handy in this type of situation. It should improve my vitality...

Hope you brought the asbestos suit, because some snake in the grass has set fire to the woods!

They may not have the lasting appeal of the *Civilisations*, *Cruise For A Corpses* or even *Sensible Soccers* of this world, but they at least perform an important job for the software companies, who realise that not everyone wants to kill Saddam or infiltrate the Russian government – some simply want to escape...

Super Cauldron is a basic platformer which, were it introduced to you at a party – unlikely though that is – would probably say something like: "Hello, I'm *Super Cauldron*, an arcade adventure, don't you know..." This somewhat elevated title is given some credence in that it does contain limited (both in terms of options and usefulness) spell casting.

Pick up a broomstick and it's chocks away, as the enemies are left earthbound and helpless.

The once-beautiful land of Cauldron is radiant no more. Hidden deep below the castle floors stood a Chest of Curses – buried and forgotten by the elders of Cauldron, intent on making their land of residence a happy, peaceful and innocent place. As is the case in situations such as this, all goes well for a few hundred years until someone stumbles across and decides to use the secret.

This someone is an evil sorceror of the Dark Kingdom, who uses the Chest of Curses to enhance his own black magic to such an extent that he is eventually able to enslave the good people of Cauldron, and rule them with an iron fist from his new home – The Haunted Castle. You are Zmira; young daughter of an elder, a trainee witch, and the person with whom the fate of Cauldron rests as we set off on the obligatory trek to restore happiness to your home.

It should be apparent by now that *Super Cauldron* is neither original, nor the best in its genre, and if for any reason there are those still not sure of this, then let's get it clear right now. Four worlds make up the game, the last of which is the haunted castle, where the evil sorceror must be defeated and beauty and harmony restored. Several sub levels are contained within each world, and by platform standards *Super Cauldron* is certainly no smaller than most.

The problem is that after negotiating the first level, you are familiar with virtually every aspect of the game, leaving few surprises for the later stages. A book of spells is the trusty tool we carry as we attempt to overcome the threats posed by goblins, orks, Neanderthals and a cornucopia of foresty creatures. Spells can be found or earned – most are quite and functional, though there is the odd nice touch such as the duplicity spell whereby clones can be unleashed on adversaries.

A magic book must be collected from each level before progression can be achieved. These hide within a locked chest and therefore require a key before they are yours. Zmira is typical of most platform sprites in size and animation – in fact *Super Cauldron* as a whole is very much an average representation of the arcade adventure/platform genre, with average gameplay, average graphics and average sound.

Those who remember with fondness this type of thing on the C64s and Spectrums of half a decade ago will derive most satisfaction; the rest of us will be less than thrilled after very little play. Nothing more than an average representation of the genre.

Simple style makes it easy to play

PROS AND CONS

Lack of innovations
Few surprises
Very average graphics

"An uninspiring, average platform game"

NAME: SUPER CAULDRON
COMPANY: TITUS
CONTACT: 071 700 2119
PRICE: £25.99
RELEASE DATE: OUT NOW
MIN MEMORY: 0.5MB

GRAPHICS	★★★☆☆
SOUND	★★★☆☆
VALUE FOR MONEY	★★☆☆☆
PLAYABILITY	★★★★☆

OVERALL 67%

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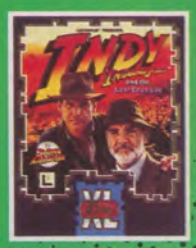

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The first two Falcon games are now available. Rob Redfurn takes a look...

ISHAR

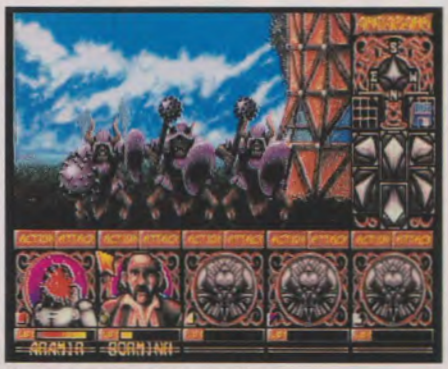
Twelve months ago, we reviewed Ishar on the ST. Now, it has been released for the Falcon, it's time to take another look.

Strictly speaking, Ishar is not new. It has been ported from the PC version. Software houses have been porting programs from one format to another for years, which means that Ishar won't take advantage of all the Falcon's features.

With 8-bit stereo sound and 256 colours, the games are a lot better in sound and vision than their ST counterparts, but does this make them worth buying? *Ishar* has the smallest manual I've ever seen for an adventure game – just 16 pages in English. However, it's smaller than that when you consider that this covers loading and the operational controls. All you get to help you on your way as far as background goes is two-thirds of a page of storyline!

Far from being a drawback, this actually makes for an interesting adventure. At the beginning, you find yourself in the middle of a field with no idea of where you're supposed to go or what you're supposed to do. Talking to others helps as does visiting taverns and other buildings.

Hmm – personality clashes demand your attention



Your team are shown in boxes across the bottom

Soon, a plot and several subplots emerge. By winning battles, recruiting a team to help and drinking in the pub, you discover that a friend of the Lord of the Land lives in the village. You set out to find him and he informs you that a medium lives in the next county, so off you go.

Along the bottom of the screen are several boxes. The first shows you – to start with, the other four are empty. These gradually fill up as you recruit the team that (hopefully) will help you along the way. A click on a face brings up a display of the character's strength, magic and experience points along with percentages showing skills in lock-picking and first aid. If you're going to survive, you need to pick a team that give a balance in all the areas. It is important to interact with others as they can help or hinder you considerably.

The characters that form your band of travellers also form their own friends and enemies, both from who you meet and within the band itself. When you recruit, all the other members get to vote as to the suitability of the candidate. If the majority say no, then that person cannot join you.

Despite the sparse manual, this is a game of hidden depth. The graphics, already described on the ST as exquisite, are improved with the addition of an extra 240 colours. The sound is quiet, but plug in external speakers or a pair of headphones and the stereo is good.

Future games that take advantage of True Colour and the DSP will eventually, no doubt, show this offering up, but for the time being, it is a vast improvement over the ST. It is not immediately apparent as the ST version was so good, but when you hear the cacophony of noise or the snores when you sleep in the tavern, you begin to realise the potential of the Falcon as an entertainment centre.

There are 40,000 locations to discover, all superbly drawn, and it's easy to get lost in the depth of the characters and the environment. All in all, this is one for adventurers who like to explore and find out what the puzzle is before they try to solve it.

The graphics benefit from an extra 240 colours

Characters speak through a window beneath the graphics

SPECIAL OFFER

Daze Marketing, UK distributors for the authors, Silmarils, are offering a £5 reduction on Ishar and Transarctica as a special offer to readers of *ST Review*. The games are only available from them at £27.99 each.

DAZE MARKETING LTD, 2 CANFIELD PLACE, LONDON, NW6 3BT TEL: 071 328 2762

PROS AND CONS

Superb graphics and sound
Massive adventure and intricate plot

Sometimes takes time to work out what to do
Tricky controls

"A great game, even better on the Falcon"

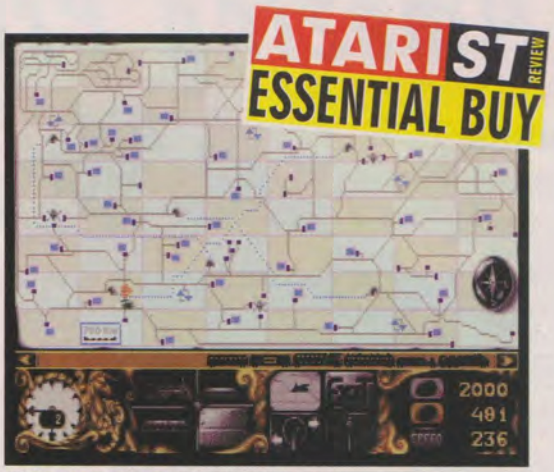
NAME: ISHAR
COMPANY: DAZE MARKETING
CONTACT: 071-328 2762
PRICE: £32.99 (SEE BOX)
RELEASE DATE: OUT NOW
MIN MEMORY: 1MB

GRAPHICS	★★★★★
SOUND	★★★★★
VALUE FOR MONEY	★★★★☆
PLAYABILITY	★★★★☆

OVERALL 89%

Stroke yer' coke and keep the engine running smoothly

The second game from Silmarils is an ecologically-aware adventure set during a nuclear winter. Rob Redfurn dons his imitation fur coat and stokes the boiler...



This control map is reminiscent of a BR signal box!

TRANSARCTICA

A lot of grown ups like to buy train sets "for the kids". Most of them end up playing with them themselves and the poor children are left watching and waiting for the footy to come on the telly so they can have a go. Well, here's a train set that is for you overgrown kids.

Following an attempt to reverse the damage done by the Greenhouse Effect, in the year 2022 two Thermo-Nuclear devices are exploded simultaneously at the pole of good old Plant Earth. The idea is that the dust and steam thrown up will create rain and deflect heat. The experiment fails, plunging the world into a nuclear winter.

The outcome of all this is that the survivors evolve into a society that travels around in huge trains, going from station-town to station-town to trade and survive. The railways are controlled by the Viking Union, a huge corporation that also controls the coal mines, supplying vital fuel for the trains. The Union does not, however, own the trains.

This monopoly of the transport system is what you have to fight in your quest to return the sun to a cold world. You play the captain of one of these trains, the Transarctica. Your job is to ensure the continuing survival of the train, avoid conflict with the Union and look for the clues that will help you to restore the sun. The game is controlled with the mouse and takes place in real time – one second equals one minute. The menu takes you to the individual control screens. The main one you need first is the engine room.

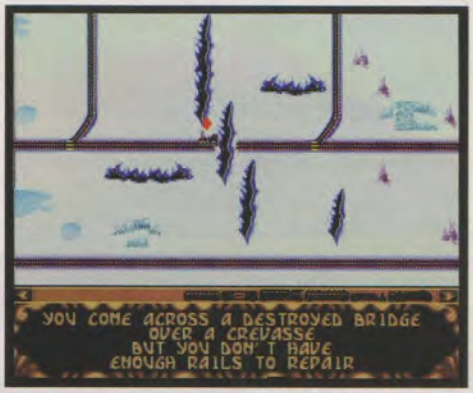
By clicking on the left character, he starts to shovel Lignite into the furnace and the right character shovels the Anthracite. A man standing at the back controls the direction and a panel controls the speed. The map is also controlled by using the mouse to click on the junctions to change the points. Watch out for other trains and mammoths on your travels. Each town can offer a different range of options. Some let you trade, others give you information and some even let you recruit soldiers. Stations will repair, destroy and move carriages at your request. You need to survive first and restore the sun by looking for clues on your travels.

There is a lot to this game, so don't expect to master it in one sitting. There are nine controls in the engine room alone. The manual is extremely useful, not only for giving instructions, but also for copy protection. While you are playing, the Viking Union will ask you for verification of your identity by quoting from the handbook. If you don't have this available, you'll find your journey cut short very quickly.

Transarctica is a great game to play with lots to do and plenty to keep the old grey matter busy. This is one you won't put down in a hurry. The ST version, allowing for the limits of 16 colours, was superbly drawn and the extra colours available on the Falcon enhance and improve the game. Connect the sound output to your hi-fi for the full effects of the 8-bit stereo sound. This game shows what 256 colour mode and 8-bit stereo can do. Just imagine what games will look like when programmers produce True Colour, DSP processed sound and graphics!

As with *Ishar*, *Transarctica* can be bought directly from Daze Marketing for the reduced price of £27.99, a saving of £5 on the list price.

The graphics take apt advantage of the Falcons 256 colours



A definite strategic problem has reared its head

PROS AND CONS

Involved game with plenty to do
Great sound and graphics

Quiet sound through a monitor

"A good game showing the early potential of the Falcon"

NAME: TRANSARCTICA
COMPANY: DAZE MARKETING
CONTACT: 071-328 2762
PRICE: £32.99 (SEE BOX)
RELEASE DATE: OUT NOW
MIN MEMORY: 1MB
HARD DISK INSTALL: YES

GRAPHICS	✪✪✪✪✪
SOUND	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪
PLAYABILITY	✪✪✪✪✪

OVERALL 91%

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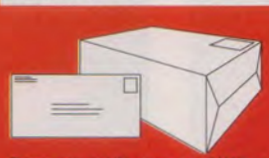

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AIR SUPPORT

Can the mighty Airbus ever be surpassed as the definitive quality sim? Dave Burgess dashes through passport control to find out...

The world of the flight simulation has never been an empty one. The *Falcon* games will perhaps always be remembered as pace setters in the field, while Thalion's *A320 Airbus* scaled new heights in terms of realism and quality. For years the erstwhile Atari user has been given the opportunity to take the yoke of every conceivable kind of craft, from Tomcats to Jumbo Jets, and the ultimate in jet-powered travel – the awesome Space Shuttle.

In fact such is the choice offered in this niche of the market that selection of a title can sometimes become something of a lottery. It is quite surprising then, given the ever-growing number of products of this kind available, that more and more are released month after month.

Or maybe not. It's true that the total flight simulators available, not only for the ST, but for other machines, numbers into the dozens, but when compared to the legions of so-called cutey-pie games which clamour for space on the shelves, the number becomes negligible. Many knew from the beginning, but more are coming to realise that the home computer is the ideal tool for education and entertainment, and that the entertainment need not necessarily be limited to deciding which brightly coloured block to leap onto next – it can actually include tasks which test the old grey matter.

Flight simulations are one such medium, and I stand guilty as charged as a big fan of the genre. Having extolled their virtues though, it must be said that it has been far too long since a truly excellent sim graced our disk drives, and with the ever belated *Tornado* seemingly lost in limbo, and the news that *Combat Air Patrol* may not, as planned, be released on the ST, the immediate future was looking rather bleak. Psygnosis stepped in with an unheralded package to keep us aviators happy. Or so they hope.

Apparently it is the future, and as with 99 per cent of such portrayals, communication between world leaders has broken down. War seems imminent, we might think, but technology has advanced so far and is so readily available that armed warfare is no longer viable – deemed by even the most fanatical of military leaders as too great a risk to their lands.

Consequently all battles are carried out as simulations, and you are a pilot in the most technologically advanced simulation centre of all – West Point Military Academy.

Before you can earn your stripes, 20 training missions must be completed to a reasonable degree of success; these range from simple reconnaissance tasks to what amount to small full simulations in their own right, and work on a pass system.

Progress is charted, and if your learning curve drops though the 45 degree angle line, you will have failed your initiation and cannot take part in the full simulated battle.

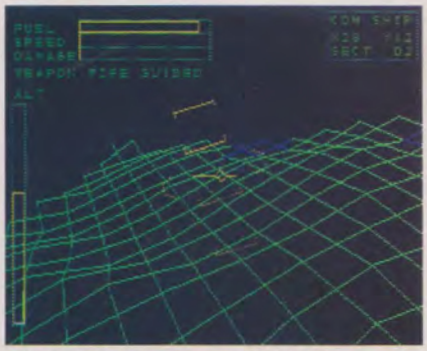
In case you have failed to notice the screenshots, let me tell you that the whole game (apart from the impressive intro) is presented using wire frame graphics. Not particularly exciting to look at, true, but my initial reaction was that by adopting this technique, Psygnosis had decided to really test the limits of the ST in terms of smoothness and speed.

But apparently not. After a while the wireframe gets less tedious and becomes simply an integral part of the game (though I really couldn't come to terms with the 50s-style 3D glasses which come in the box, and are alleged to enhance the effects no end). A fact that cannot be escaped though, is the bone-aching jerkiness of the thing.

Advanced weaponry is attached to your craft; dozens of hi-tech wing-launched and ground-to-air missiles are under your constant control, and an excellent feature is that – far from being a humble flight sim – *Air Support* encompasses all manner of ground vehicles which can be controlled independently or as part of a mission-happy unit. Futuristic factories are also important since new vehicles can be manufactured there.

Combat isn't always the most sensible plan; the weaponry you build around your acquired colonies should serve as a deterrent to warfare with the mother ship, from which all operations are controlled, and which, if lost, effectively spells the end.

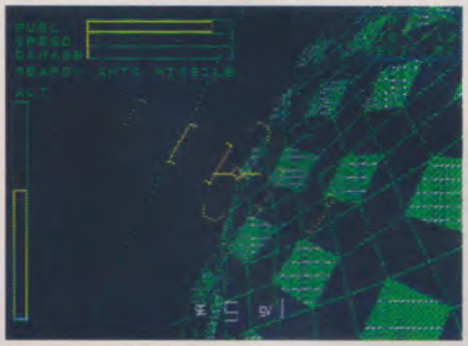
Air Support contains far more features than can be detailed on this page, but unfortunately most are rendered null and void by the fact that the whole simulation aspect is so badly put together. Gameplay in an affair such as this needs the programmers' greatest attentions; it seems that this has not been the case, and that instead, the team have decided to pack in as many elements as they can. It doesn't really work, but is a commendable effort nonetheless, and should *Air Support 2* ever rear its head I would be interested to see the improvements.



The landscape can be filled in, but it simply makes matters worse

The commander shakes his head sadly and waits for a sequel

Dogfights are a thing of the past, but ground-to-air missiles are always a threat



Your mythical plane. Had it looked like this in the game, it might have been a different kettle of fish

Lots of features with scope for a truly good game

PROS AND CONS

Jerkiness and wireframe do not mix – a real eye-aching shame

"A good idea, badly implemented"

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GRAPHICS	★★☆☆☆
SOUND	★★★☆☆
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PLAYABILITY	★★☆☆☆

OVERALL 59%

PD SCENE

What's out there in the land of PD? Nial Grimes dons his magic wand and conjures up a natty selection...

PLOP

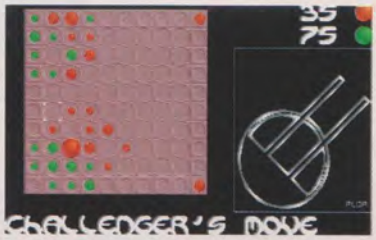
ATARI ST REVIEW BUDGET BUY

TOWER PD • DISK NO: GSC.54 • £1.50 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: As the flow of commercial puzzlers begins to dry up, shareware authors are just beginning to really get into their stride. Dozens of examples are out there in PD land, but very few can claim to be as good as *Plop*.

The concept is vaguely similar to *Othello*, the idea being to dominate the play area with your colour. Pieces can be positioned anywhere on the board and when clicked a number of times, increase in size. When a piece expands so far as to reach the limits of its square, it explodes – or "plops" – affecting the colour of all adjacent pieces. Play continues until the board contains only one player's colour – naturally, this is the winner. Sound consists of a range of clear samples and the graphics are of a very high standard.

ST REVIEW COMMENT: "Agreed, it's another formula puzzle game, but this one is really very good. The presentation, graphics and sound are all just about perfect and don't be put off by the simple gameplay – you'll be surprised just how tough it is to master!"
✪✪✪✪✪



Click on the squares, expand your pieces and Plop your way to board supremacy. Sounds easy, but it isn't!

Pit your wits against a trio of mega-intelligent digital opponents in the Plop tournament. It's a compulsive game with superb graphics and sound to match.

WORLD FIGHTING CHAMPIONSHIP

LAPD • DISK NO: G.261 • £1.50 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: Nine of the world's toughest, meanest, baddest bad guys meet in this, the first ever beat-'em-up to grace the public domain circuit. You play one of three shady characters from around the world in an attempt to become the world fighting champion.

The painful animation and tiny amount of gameplay just don't spread far enough to make World Fighting Championship worth buying.

Characteristically feeble plot out of the way, it's into the battle arena where the action begins, or at least it should! The problem is the speed of the game, which is just painful. We are talking around two frames per second here!

In terms of presentation, the graphics are acceptable, but I wish the same could be said for the animation! From the wooden bow at the start of each match to the waddle as each player advances or retreats, this stuff will have you in stitches! Dull gameplay, naff animation and very little playability – what more is there to say?

This is about as good as the graphics get, and you thought Shadow Warriors was slow? On the plus side, the sampled sound is pretty good.

ST REVIEW COMMENT: "The idea is a good one, but *World Fighting Championship* is just too slow to be playable. If you're that desperate for a good beat-'em-up, spend the extra fiver and buy *IK+*."
✪✪

MURDER ON THE ORION EXPRESS

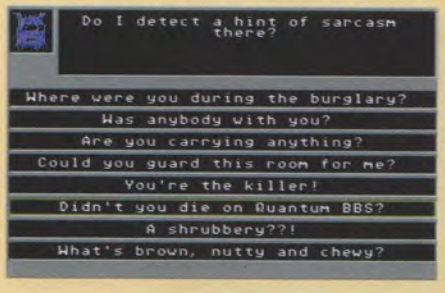
TUMBLEVANE PDL • DISK NO: OCL.2 • £3 • MEMORY: 0.5MB • LICENCEWARE

IN BRIEF: There's been a murder aboard the Orion Express and it's your job to weedle out the evil perpetrator. This you do by moving around the ship and questioning the passengers, comparing their alibis and making some use of those "little grey cells" (sorry, couldn't resist it!). You get three guesses at the murder, beyond which it's off to the retirement home for balding detectives with blatantly fake accents for you.

Interrogation is carried out through a set of predefined questions and it's just a case of clicking on what you want to ask and making a note of any information you find useful. All passengers will be completely truthful, except the murderer who can lie at will (low down scum that he is). There's a strong thread of humour running through the game and it's very much a parody of more serious commercial software.

ST REVIEW COMMENT: "Those expecting a huge, deep *Cruise for a Corpse* type game will be disappointed, but if you're happy to set your sights a bit lower and enjoy a good laugh, *Orion* comes recommended."
✪✪✪✪

If you're a Cluedo fan, be sure to get hold of Murder on the Orion Express – it's better acted than the TV program and a lot more challenging than the board game!



Let the interrogation commence! Suspects can be questioned as much as you like and each set comes complete with a few rib ticklers!

BIO-HAZARD

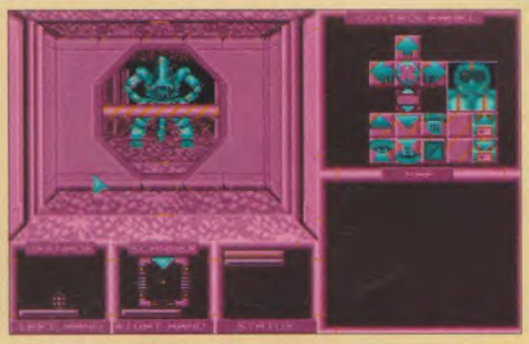
ATARI ST REVIEW BUDGET BUY

FLOPPYSHOP • DISK NO: GAM.3658C • £2.50 • MEMORY: 1MB • SHAREWARE

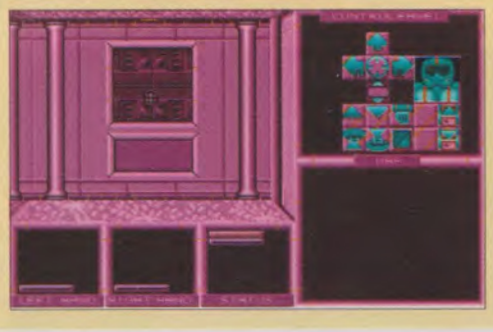
IN BRIEF: There must be very few ST owners whose lives have not been affected by *Dungeon Master* at some time or another. It was a game that redefined role playing on home computers and is considered by many as the best game ever released. Little wonder then that we were inclined to take *Bio-Hazard*'s claim of being "*Dungeon Master* in space" with a pinch of salt.

The screen layout is of the standard RPG variety with buttons assigned to move and handle objects you find. The aim is simply to find the ladder leading down to the next level and naturally you'll have to deal with all the nasty xenomorphs that stand in the way. The shareware version limits you to two storeys, beyond which you'll have to dig gently into your pockets for the £5 registration fee.

ST REVIEW COMMENT: "This is one classy piece of software! The graphics are a little bit drab, but these fade behind a huge amount of playability and some very atmospheric sound effects. If you're an RPG fan, you need this game!"



You need a pass to progress beyond this point, and be sure to whack that grenade button if you don't want to feature on this fellow's lunch time menu.



Wall dispensers scattered around the complex contain goodies such as axes and pass cards. Forget Dungeon Master – this time it's war!

CURSE OF AZRIEL

LAPD • DISK NO: L31 (2 DISKS) • £4 ALL IN • MEMORY: 1MB • LICENCEWARE

IN BRIEF: *Curse of Azriel* takes the age old sea-trading concept made popular by the likes of *Taipan* in the early eighties and attempts to update it to 16-bit standards. An atmospheric six - page novella sets the scene for your quest: find the swords of Azriel.

There aren't many trading games in the public domain, so The Curse of Azriel makes a refreshing change. The graphics are quite nice too.

Essentially, this involves sailing from port to port trading to increase your wealth and finding out as much information as possible by listening in on conversations and bribing the mayor. Storms at sea and pirates all play a part in trying to bring your quest to an untimely end, hence the need to make sure you have enough men and weapons to deal with both.

Moving your ship is entirely mouse-driven, as is 90% of the game, although navigation can be a bit of a problem thanks to the lack of a map.

ST REVIEW COMMENT: "*Curse of Azriel* is an ambitious game and it works quite well, providing you read the *novella* to set the scene. Even as an adventure though, a little more action wouldn't go amiss."

An atmospheric animation leads you into the docks, although by the tenth two-minute performance you're just about ready to throw your ST through the nearest window!

HAMMER TO FALL

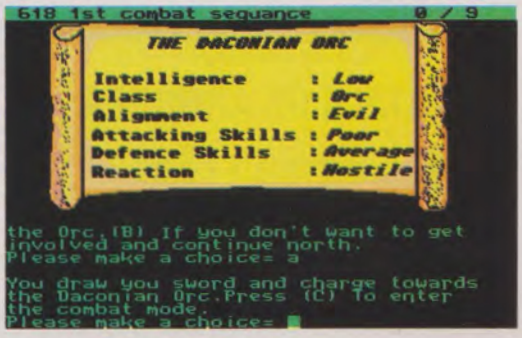
TUMBLEVANE PDL • DISK NO: HST.01 • £3 • MEMORY: 0.5MB • LICENCEWARE

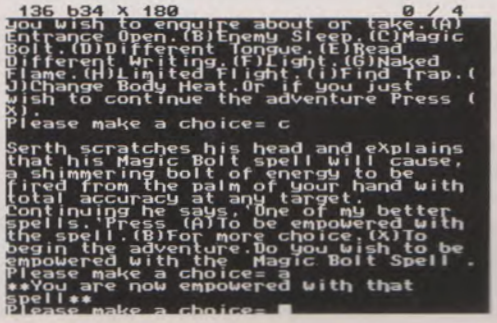
IN BRIEF: *Hammer to Fall* takes you on a trip into the magical world of Daconia to defeat the evil Kildarken and prevent all hell breaking loose. It's another text-only affair, although rather than use a standard parser the game opts for a multiple choice approach. This makes it very easy to play, but it won't pose much of a challenge to any experienced adventurers. A "battle mode" which allows you to take on any of the trolls, orcs or other nasties you meet gives the game an almost RPG feel. So what about the atmosphere?

Well, an accompanying text file attempts to set the scene and although the storyline is quite good, the punctuation lets things down badly. This extends into the game where a lack of spaces after commas and full-stops is a constant source of frustration It's a shame, because the creative imagination is obviously there, it's just the presentation that spoils it.

ST REVIEW COMMENT: "With some stylish graphics, *Hammer to Fall* could be a very classy adventure. As it stands, it lacks atmosphere and the default 40 column display is tricky to read. If you think you can forgive these foibles, give it a try."

Through the use of its "battle mode", Hammer to Fall attempts to create an RPG-style atmosphere, but simply choosing between "stomach punch" and "high jab" is not a recipe for excitement.





Graphics and grammar aside it's a pretty good adventure. An eighty column text mode would have improved playability somewhat.

Dave "Grab-a-Bargain" Jones looks at the latest to become available on the budget scene...

VFM

PREHISTORIK

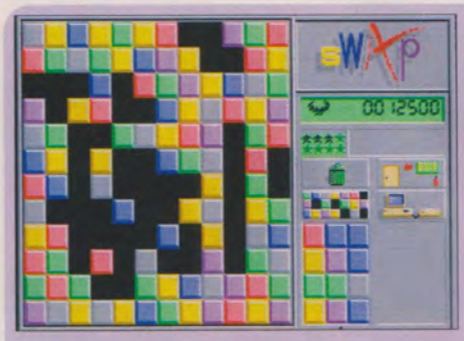
FOX HITS • £9.99 • 071-700 2119

IN BRIEF: This cute platform game from Titus Software takes us back to the Stone Age. Your character *Prehistorik* is a member of the T-Bone tribe, and he's hungry. Your job is to guide him through his prehistoric world, avoiding the obstacles and feeding him. There's just one snag – the food's alive!

Armed with your trusty Diner-Club, you have to kill the many creatures with names like Glubba-Glub, Chimp-agogo, Pteriyaki, Boa-dee-sauce and Chukicus. Each foe takes from one to five blows with the club to defeat, but beware, some are invincible and have to be avoided at all costs.

ST REVIEW COMMENT: A good use of humour and cute graphics make this one worth adding to the collection if you like platform games. *Prehistorik* is perhaps not as good as others of the genre, but is playable and fun. After all, that's what you buy a game for, and, at only £9.99, not a bad investment.

Feeding your character is the name of the game in Prehistorik



Nice idea but nothing to keep you playing

SWAP

FOX HITS • £9.99 • 071-700 2119

IN BRIEF: You either love puzzle games or you hate them. There is no half-way point. I am in the former category, hopelessly hooked on *Tetris* and *Lemmings* amongst others.

Swap presents you with a board of coloured tiles and the object is to turn the coloured tiles over to form clusters that match. When you do, they disappear and the more tiles you destroy in the smallest number of moves, the higher your score.

The game will monitor your performance, awarding stars according to how well you do. When you've got eight stars, you can quit the level and progress on to the next. *Swap* decides how good you are and progresses accordingly. For example, if you play level one very well, you may find yourself on level 50 next!

ST REVIEW COMMENT: The indescribable requirement of a good puzzle game is a "hook", something that makes you want to play it and play it, until you, and everyone around you, is totally sick of it, but won't stop until you finish that level. *Swap* doesn't have it! In my opinion, there is no real goal, so there's nothing to keep you playing.

CRYSTALS OF ARBOREA

ATARI ST REVIEW BUDGET BUY

DAZE MARKETING • £9.99 • 071-328 2762

IN BRIEF: Silmarils have quite a bit of coverage in this month's Screen Scene. This budget offering is the prequel to *Ishar*.

Lord of Chaos, Morgoth, has caused the Gods to drown all of the lands of the Earth except for Arborea. The four sacred crystals of Harmony have been stolen by Morgoth and his cronies. You are Prince Jarel and you have to pick a team of six to help you recover the crystals.

There are 16,000 different locations for you to explore. The screen gives you a 3D perspective and some good graphics add to the atmosphere of the game. The sound is equal to the images on the screen and the ability to play the game from the character screens and move around using the map take some of the tedium out of this type of adventure.

ST REVIEW COMMENT: The Silmarils games are rarely disappointing and this is no exception. The graphics and sound are very good and the game-play engrossing. This is well worth a tenner of anyone's money, provided you're looking for more than a cute platform or shoot-'em-up.

The beginning – the first in the Ishar series.

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EDUCATIONAL

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PD ZONE

MORSE CODE TUTOR

LAPD • DISK NO: MA.138 • £1.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: Short wave radio used to be limited to a small elite who were willing to spend hours perfecting morse code and studying boring guide books, but no longer apparently. Thanks to changes in the law, from 1990 anybody capable of dit-dit-ditting their way through five words per minute can get hold of a Novice licence and find themselves broadcasting to the world. Enter the *Morse Code Tutor*, to make even this small task easier.

The various lessons are named "alpha" to "victor" in true "ham" style and take you through stages designed to embed the codes in your mind. The programs are quite well presented with cartoon-style graphics liberally sprinkled throughout and each comes with its own set of notes on usage. The speed is adjustable in four stages from 5 to 16 words per minute and registration brings a cable which lets you connect your "key" to the joystick port for some real practice.

ST REVIEW COMMENT: "If you need to learn Morse code, this is a good option, although the documentation is likely to confirm all the stereotypes you have about radio hams!"
✪✪✪✪

Pen and paper at the ready, it's your job to decipher the cryptic noises issuing from your ST's speaker. Me? – I got stuck trying to translate the STOS intro music!

Admittedly, The Morse Code Tutor is probably the easiest way to learn Morse code, but aren't computers designed to do this sort of thing for us?

GREY MATTER & SPLAT

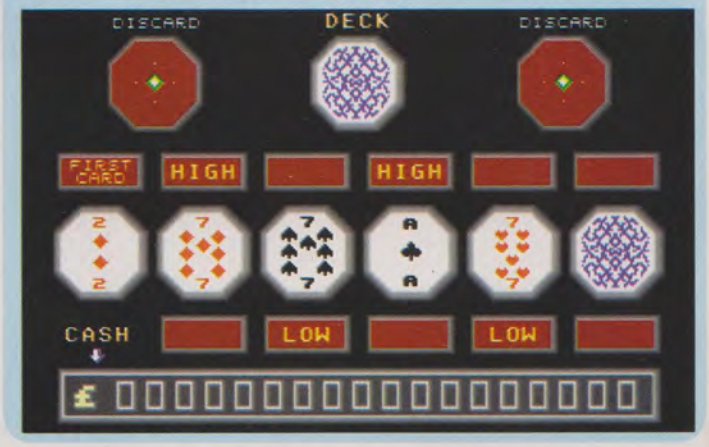
CALEDONIA PDL • DISK NO: GM.166 • £2.50 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: It's compilation time! This disk contains two smaller games from the Dunce's Cap range, both with an educational theme. First up is *Grey Matter* which is a word game based around anagrams. The idea is to unscramble a set of everyday words – ranging from five to eight letters in length – within the allotted time. Succeed and you move onto the next round for more of the same.

Not wildly original, agreed, but Grey Matter's synthesised speech and slick presentation make it worth a second glance.

As a bonus you also get *Splat* – a variation on the "Hi-Low" theme. In case you haven't come across this game in the past, the aim is to guess whether a card in a sequence of six is higher or lower than the last. Get the whole set correct and your score will be increased; it's as simple as that. Both games feature "wooden" speech synthesis throughout.

ST REVIEW COMMENT: "Admittedly the games are simple, but they're fun to play and quite addictive once you get into them. The voice synthesis is a good gimmick, but it's likely to drive you insane before too long!"
✪✪✪✪



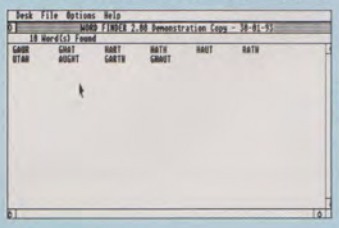
WORD FINDER

GOODMAN INTERNATIONAL • DISK NO: GD.1925 • £2.75 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: *Word Finder*, as the name suggests, is a tool for manipulating words. Its abilities are many and varied ranging from spell checking – although only one word at a time – to the solution of anagrams. It's also very good at extracting as many words as possible from the "letter square" games found in most newspapers.

A huge dictionary containing over 40,000 words is included with the program and more can be added once the £5 registration fee has been paid. *Word Finder* was written as an exercise in the use of the GEM AES library and as a result is very nice to use indeed, being completely mouse-controlled. On-line help takes the place of any documentation on disk, but to be honest usage is so straightforward I doubt whether you will need it.

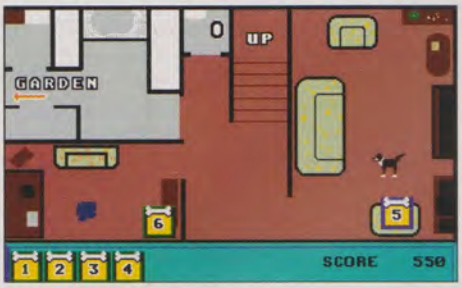
ST REVIEW COMMENT: "*Word Finder* is extremely good at what it does, but it's hard to see what practical application it could have. If it was in desk accessory form it could serve well alongside a word processor, but at present it's a solution without a problem!"
✪✪✪



PLAYTIME

GOODMAN INTERNATIONAL • DISK NO: GD.1884 • £2.75 • MEMORY: 0.5MB • PUBLIC DOMAIN

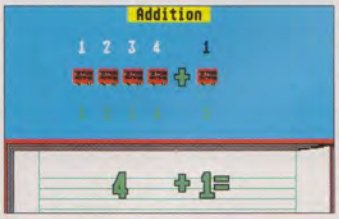
IN BRIEF: *Playtime* was written by a group of Devon schoolchildren as a class project, so you could say it has been of educational value before it was even released! The package is subdivided into six games, namely: Drawing, Maths, Colours, Balloons, Ben's Bones, and Drawing with Shapes. Each can be selected from a large, colourful menu and all are very easy to play, using a mixture of mouse and joystick controls.



Help Ben to unearth his bones and collect a pile of "Bix" bonuses in the process. The house first and then it's into the maze!

Probably the best of the bunch is Ben's Bones which sees you guiding Ben the dog around an empty house collecting his buried treasure in sequence. There are eight levels to complete and two scenarios to choose from.

On the educational side, Maths is a standard "see the sum and type the answer" game covering addition, multiplication, subtraction and division. Once again the level starts very low to gently break the young player into the game.



On a more educational note, Maths is a colourful introduction to basic mathematics. Get a question right and you're treated to a pretty ditty.

ST REVIEW COMMENT: "Even though *Playtime*'s graphics are a little substandard at times, the games themselves are very good. The angle is more towards fun than education, but better that than a dull game."
✪✪✪✪

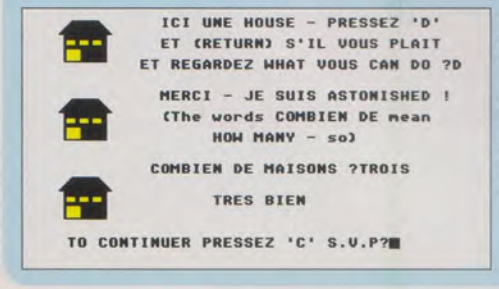
THE FRANGLAIS COLLECTION

FLOPPYSHOP • DISK NO: EDU.3642C • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: With 1992 nothing but a hazy memory, it seems we are are finally part of the European community. And with no clause in the Maastricht treaty stating that all Europeans should learn English immediately (why?!), it seems that we are stuck with having to learn a few new languages ourselves.

Franglais is designed to help you take your first steps with the French language and uses a totally original approach in doing so. Instead of using the infamous "swallow vocabulary until it hurts" approach, French words are simply substituted for English throughout the lessons. It's obvious what the words should be and therefore the French becomes imprinted in your brain – or, at least that's the idea. On this disk you will find all six installments in the *Franglais* series taking you from basic counting to verb conjugation (yikes!).

ST REVIEW COMMENT: "Anybody thinking of learning French would do well to get hold of this disk. The method of teaching may seem unusual, but it's easier than studying pages of boring vocabulary and the strange thing is it seems to work!"
✪✪✪✪



Franglais' teaching method of 'word-association' appears to work well and simple graphics are used to help out at tricky points.

TOP TEN EDUCATIONAL PACKAGES

1 THE FRANGLAIS COLLECTION • FLOPPYSHOP • DISK NO: EDU.3642C • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

Give yourself a basic grounding in the French language with this collection of the first six instalments in the *Franglais* series. As the name suggests, the program uses a mixture of French and English to accomplish its task and the method seems to be fairly effective.

2 THE MAGIC SPELLER • SOLENT SOFTWARE • DISK NO: BY NAME • £2.00 • MEMORY: 0.5MB • PUBLIC DOMAIN

A nice looking spelling tutor which uses extensive speech synthesis and comes complete with an easy-to-edit dictionary. The speech can be a little hard to understand at times, but you can request a repeat performance.

3 WEATHER • GOODMAN INTERNATIONAL • DISK NO: GD.1883 • £2.75 • MEMORY: 0.5MB • PUBLIC DOMAIN

Don your favourite pair of enormous glasses for this colourful trip into weatherman land. click on the panel of icons to add ice, hail and snow to your least favourite area of the country! Superb presentation and ideal for school projects.

4 SUPER FUN • LAPD • DISK NO: L.37 • £2.50 • MEMORY: 0.5MB • LICENCEWARE

A collection of nine titles crammed onto one disk. Educational value varies from program to program, ranging from the excellent First Division to the utterly pointless (but quite fun) Noisemaker. Good incentives and cheerful music put this head and shoulders above most STOS offerings.

5 SKELETON • FLOPPYSHOP • DISK NO: BUD.3638 • £2.95 • MEMORY: 0.5MB • LICENCEWARE • HI-RES ONLY

Your very own guide to the bone structure of the human body. From the moment the program runs, the SM124 simply sparkles with delectable graphics and plush presentation. Also included is a test mode to help you retain all the essential (not!) information.

6 GREY MATTER & SPLAT • CALEDONIA PDL • DISK NO: GM.166 • £2.50 • MEMORY: 0.5MB • SHAREWARE

Two education-oriented games from Dunce's Cap. *Grey Matter* is a word quiz based around anagrams and *Splat* is a variation on the Hi-Lo theme. *Grey Matter* is probably the best of the two, although the words used might be a touch too complicated for younger players.

7 MORSE CODE TUTOR • LAPD • DISK NO: MA.138 • £1.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

Teach yourself the language of the radio ham with this STOS-written guide to Morse code. The tutorial starts at the very beginning and claims to take you right up to professional standards (16 words per minute!) although obviously a lot will depend on how much effort you put in!

8 SHIPWRECK • MERLIN PD • DISK NO: MPD.0352 • 99p • MEMORY: 0.5MB • PUBLIC DOMAIN

An animated tale of a Robinson Crusoe character whose only chance for survival rests on your knowledge of maths. Get the answers correct and he will move closer to the rescue team; get them wrong and it's curtains for Mr. Crusoe. The animation is a little childish in places, but it's colourful enough and the plot is a real incentive to push on to the end.

9 PLAYTIME • GOODMAN INTERNATIONAL • DISK NO: GD.1884 • £2.75 • MEMORY: 0.5MB • PUBLIC DOMAIN

A range of educational games and utilities for younger children. Maths, drawing and fun all feature,and the graphics are just about acceptable. *Ben's Bones*, an animated game with eight levels, is probably the pick of the bunch.

10 WITCHES, MICE & FAIRY TALES • DISK NO: G.266 • £1.50 • MEMORY: 0.5MB • SHAREWARE

A selection of four games based around popular fairy tales and children's characters. The first two are walk-through fairy tales which replace the child's name with that of the hero, and *Witches & Mice* – two board games similar to Monopoly in style – complete the round-up.

PD ZONE

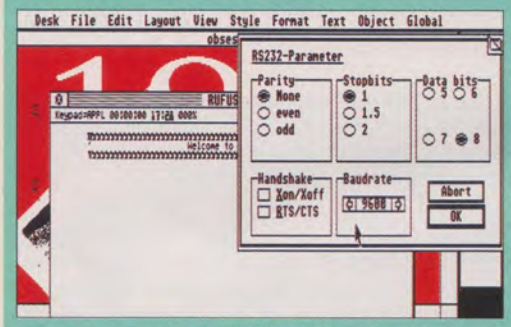
RUFUS

FLOPPYSHOP • DISK NO: COM.29 • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

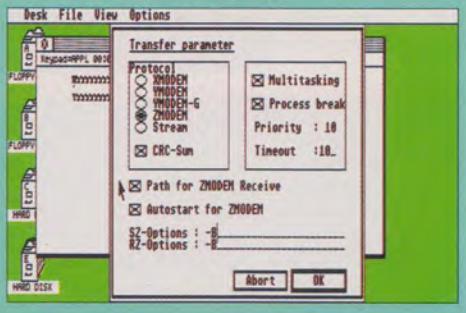
IN BRIEF: There is nothing more boring than watching your ST download a bulky file from a bulletin board, especially when you have nothing better to think about than your rocketing phone bill! The *Rufus* desk accessory offers a solution to the problem in the form of multi-tasking downloads. What this means to you and me is that your word processor, desktop publisher, or any other GEM application can be used while your file is downloaded in the background – magic!

Of course, this approach does have disadvantages. For a start your ST can only do so many things at once, so the speed of downloads inevitably decreases, and you've got the occasional worry of a software clash, but most would agree, the benefits outweigh the small increase in cost. Terminal emulation is through a GEM window with the help of AMCGDOS – looks very classy indeed.

ST REVIEW COMMENT: "Installation can be a bit of a pain thanks to the less than helpful documentation, but this aside *Rufus* is almost as good as its commercial rivals. GEM programming at its very best."



Rufus works alongside 99% of GEM applications and with the right GDOS fonts it's possible to emulate just about any terminal.



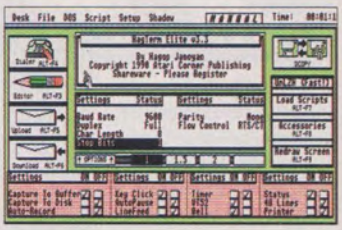
As a desk accessory Rufus can handle X,Y and Z-Modem transfers in the background, leaving your ST free to get on with more important things.

HAGTERM ELITE

MERLIN PD • DISK NO: MPD.1269 • 99P • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: *Hagterm Elite* is the Ford Fiesta of the communications world. It's divinely practical, features a fair turn of speed, but doesn't really set the world alight with innovation.

An enormous GEM dialogue box fills the screen when you boot up and from here you have access to a user-friendly text editor, file transfers, all the RS232 options you could hope to use, and of course the dialer. Switching between terminal and control screens is accomplished with the right mouse button and that age-old problem of the BBS hanging up on you when you pause for one millisecond too long is tackled with a 'BBS Wait' menu option – nice touch!



Hagterm scores very highly in the ease of use stakes, but it's a bit behind the times in terms of speed and transfer protocols.

Scripting is perhaps the exception to *Hagterm*'s "practicality before power" rule. It borders on a programming language, and several files can be installed simultaneously in the "Script" menu for instant access.

ST REVIEW COMMENT: "*Hagterm* is a good, solid package, but possesses nothing to recommend it over the competition. If ease of use, a cuddly GEM interface and good scripting all feature highly on your list of requirements, this is the one to go for."

XYZ 2.01

THE ST CLUB • DISK NO: DMG.26 • £1.45 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: Considering Z-Modem is the fastest, widely used transfer protocol, it's surprising how few PD and shareware packages are able to use it. Fortunately, this is no longer a problem, because *XYZ* is quite happy to take control and handle X, Y & Z-Modem transfers transparently, before dropping you gently back into your comms package.

Any software that is capable of calling an external utility for transfers – including *Rufus* and *Freeze Dried* – is likely to play ball and the speed increase is quite significant compared to clanky old X-Modem. Batch downloads are also catered for and a status report, giving constant information on speed, progress and remaining time, is displayed constantly on screen. Full documentation on the switches supported are included to make installation as painless as possible and at $10 you can hardly complain at the registration fee either!

ST REVIEW COMMENT: "*XYZ* is an essential companion to any terminal software that doesn't support Z-Modem. If you're still using unreliable utilities such as *SZ* and *RZ*, get yourself a copy immediately!"

FREEZE DRIED TERMINAL

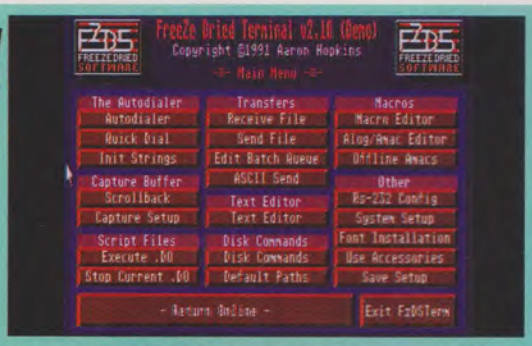
ATARI ST REVIEW BUDGET BUY

NEW AGE PDL • DISK NO: COM.5 • £1.50 • MEMORY: 1MB • SHAREWARE

IN BRIEF: A turbo charged modem is all well and good, but unless you have software to cope with it, the extra speed simply goes to waste. The *Freeze Dried Terminal*, or FDT to friends, takes this into account and is without doubt the fastest comms software available for the ST, handling speeds of up to 19,200 baud with ease.

In order to be as quick as possible, GEM has been dispensed with altogether, although the custom alternative is nice to look at and equally easy to use. File transfers of the X, Y and Z-Modem varieties are all handled through two external utilities.

As with all feature packed comms programs, setting up can be a bit tricky, particularly if you're new to the scene. Mind you, most of the defaults are quite "intelligent" so you shouldn't have too many problems.



Freeze Dried's main control screen complete with custom designed interface – quite a bit prettier than GEM and more than a match in terms of speed.

ST REVIEW COMMENT: "The *Freeze Dried Terminal* is without a doubt the best shareware comms package for the ST. It would also feature high on any self respecting Falcon owner's shopping list but unfortunately seems unable to talk to the new serial hardware."

PBM CHESS

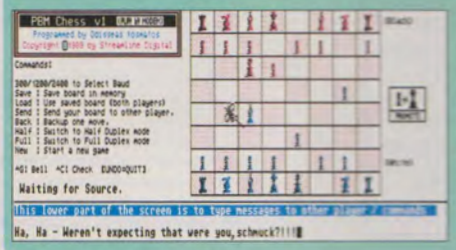
THE SHAREWARE COMPANY • DISK NO: BY NAME • £1.75 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: Let's face it – computers are just too damn good at this chess lark. Most programs may not pose much of a challenge for the Gary Kasparovs of this world, but for the rest of us, holding our own against Chessmaster is a joke, which is where *PBM* – or Play by Modem – Chess comes in.

With a copy at either end of a modem connection, you can happily pit your wits against your favourite human opponent whether he be next door or 20,000 miles away (although let's face it, if you're gonna dial international you may as well just buy a plane ticket!).

In terms of the game, you get a nice graphical representation of the board and movement is mouse-controlled. An area at the bottom of the screen is reserved exclusively for comments between players, so the modem connection needn't prevent the obligatory hurling of abuse!

ST REVIEW COMMENT: "It's a good idea, but you have to admit it has its problems – not least, the fact that playing chess by phone is likely to cost you a fortune. It will probably be cheap enough at local rate, but that kind of defeats the point doesn't it?"



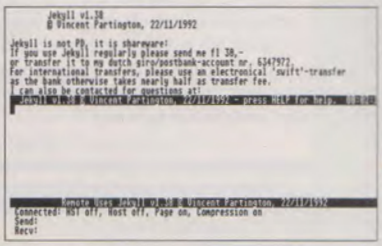
Oh the tension, the excitement, the atmosphere! You'd have to go a long way to beat the thrill of playing chess by modem!

JEKYLL

FLOPPYSHOP • DISK NO: COM.3103 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

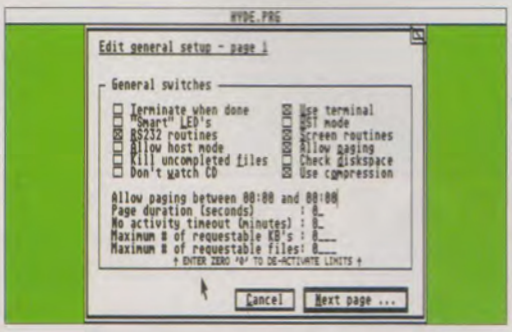
IN BRIEF: It's a little known fact that 99% of modems support duplex, or in other words, two way, simultaneous data transfer. The problem is that the common file transfer protocols just don't make use of it. The result? – You end up waiting like a lemon for your ST to receive a file, when in reality your modem is capable of letting you continue reading conferences or even uploading files at the same time!

Jekyll is the first file transfer protocol for the ST to make use of this ability and has been put to good use by Dutch bulletin boards for some time. The speed increase you yield is not just limited to the duplex either. *Jekyll* also uses a variation of the LZH compression algorithm to increase transfer speeds by up to four times!



ST REVIEW COMMENT: "What a great idea! Unfortunately the protocol doesn't seem to be very well supported in the UK. Come on SysOps, add Jekyll support to your boards!"

Jekyll in action.



Jekyll's twin brother Hyde (oh dear... Ed) eases the complicated process of configuration, although you'll need 1MB to use it.

TOP TEN COMMUNICATIONS PACKAGES

1 FREEZE DRIED TERMINAL • NEW AGE PDL • DISK NO: COM.5 • £1.50 • MEMORY: 1MB • SHAREWARE

The fastest communications package for the ST, featuring a built-in text editor, huge autodialler, adjustable capture buffer, Z-Modem file transfer, a powerful scripting language and lots more besides. Ideally suited to making the best of your high speed modem, *Freeze Dried Terminal* is simply the best.

2 RUFUS • FLOPPYSHOP • DISK NO: COM.29 • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

A beautifully crafted GEM interface, pop-up menus and support for AMCGDOS make *Rufus* one of the best looking comms programs around. Being a desk accessory it's capable of background file transfers using X or Y-Modem protocols and Z-Modem can be added via an external utility.

3 HAGTERM ELITE • MERLIN PD • DISK NO: MPD.1269 • 99p • MEMORY: 0.5MB • SHAREWARE

Functional but unexciting, *Hagterm* is a good choice for the beginner. By far its biggest asset is a superb scripting language, but the colourful interface and simple text editor also add to the appeal. The main fly in the ointment is a lack of Z-Modem support, but it's not a major problem.

4 MULTRAN • MERLIN PD • DISK NO: MPD.1087 • 99p • MEMORY: 0.5MB • PUBLIC DOMAIN

If you need background file transfers, but don't want to go as far as *Rufus*, *Multran* is a good choice. It's not a terminal program as such, but is capable of storing and dialling numbers. X-Modem is the only protocol supported, but the program's lack of complexity makes it usable on half meg machines.

5 XYZ 2 • THE ST CLUB • DISK NO: DMG.26 • £1.45 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

This handy little utility adds Z-Modem support to most comms packages. This makes for increased speed, automatic initialisation and batch transfers to mention just a few of the benefits. The latest version supports uploads as well as downloads and registration is a mere $10.

6 THE LITTLE BLACK BOOK • MERLIN PD • MPD.904 • 99p • MEMORY: 0.5MB • PUBLIC DOMAIN

We all know it's good comms practice to think up a different password for every bulletin board you use, but remembering which word belongs to which board can be a problem. Enter *The Little Black Book* desk accessory to memorise all those cryptic creations and one or two other useful details.

7 JEKYLL • FLOPPYSHOP • DISK NO: COM.3103 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

A duplex file transfer protocol which is used extensively by ST bulletin boards in central Europe. It allows the simultaneous down and uploading of files as well as compression "on-the-fly" and comes complete with its own GEM driven shell named *Hyde*.

8 VANTERM 4 • NEW AGE PDL • COM.6 • £1.50 • MEMORY: 1MB • SHAREWARE

Vanterm is another program that scores highly in the ease-of-use stakes. Amongst its many talents are support for all the popular transfer protocols and a useful autodialler. The presentation is a bit lacklustre, but the program is regularly updated and comes complete with an extensive manual.

9 UNITERM • CALEDONIA PDL • DISK NO: CM.04 • £2.50 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

Uniterm is a compromise between ease of use and speed. Every operation has a keyboard shortcut, but if you forget any of the combinations you can always WIMP out to a GEM interface by pressing <HELP>. Regularly-used options are assigned to a pop-up menu available at any time by clicking the left mouse button.

10 STARNET BBS • FLOPPYSHOP • DISK NO: BBS.01 • £2.50 • MEMORY: 0.5MB • SHAREWARE

Fancy setting up your own bulletin board? Then *Starnet* might be just up your street. In common with all BBS software, setting it up can be pain in the backside, but there is a step-by-step guide included on disk to break you in gently.

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GENERAL

GEN-02 ST-Tour (Specially for beginners) 'S'
GEN-04 Your 2nd ST Manual (A MUST) 'S'
All the little things (and some not so little) that our friends at ATARI should have told you but didn't. This is the manual that should have been supplied with your computer (at least in our humble opinion).
GEN-05 Adventure Writer/Skymap + 4 more 'D'
GEN-06 Archive Suite (back-up in less space) 'S'
GEN-09 ZX-81 Emulator + lots of programs 'D'
Back to those halcyon days of the ZX-81 Emulate (if you must) this forgotten unit
GEN-12 Formfinder 2.1 (find a winner?) 'S'
If you like a flutter on the horses then maybe this program can help to make it profitable! This is a Working Demo. Full version available
GEN-16 60 assorted samples (SPL Format) 'D'
GEN-20 Firstbase DB+7 more good programs 'D'
GEN-22 E-Plan (Electronic Circuit Designer) 'S'
GEN-24 Joke Database (Laugh with us!) 'D'
GEN-25 Quartet Samples II (730k of samples) 'D'
GEN-30 Film File Enquiry 'D'
With this unusual Database you can keep track of all your favourite Films, Actors, Directors etc. Lots fo classic films inc
GEN-31 Data File (TV Titler/Asst. Chef/Paarty) 'D'
Great value on this one: A Video Titler and extensive Recipe/Instruction Database + a bevy of alchafrolic cocktails!!
GEN-34 Sozobob 'C' (language) 'D'
GEN-35 Spectrum Emulator (with programs) 'S'
Introduce your ST to that long, long ago entity, the ZX SPECTRUM complete with working progs

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DEM-97 KLF Demo (House hit + dancers) 'D'
DEM-98 Star Wars Rap 'D'
DEM-101 Spinning Dolls + Shiny Bubbles 'D'
This one takes a while to load but the end result is more than worth the wait
DEM-84 Things Not to Do (EXCELLENT) 'D'
Very Humorous, animated account of things not to do and the result if you do!
DEM-67 Fish & Chips (GET THIS ONE) 'D'
Loads of excellent demos with some very funny interludes between them
DEM-46 European Demo's (2 DISK SET £2.75)
DEM-44 Skid Row (2 DISK SET £2.75)
DEM-43 Punish Your Machine(2 DISK SET £2.75)
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DEM-75 Dark Side of the Spoon 'D'
DEM-82 Wasted Years 'D'
DEM-70 Lifes a Bitch 'D'
DEM-54 Gateway to Hexland 'D'
DEM-48 Summoning the Spawn 'D'
DEM-100 The Run (animation from T. Richter) 'D'
This one is so much better than the original AMIGA version
DEM-55 Art Machine 'D'
Sit back and enjoy this stunning artwork

BUSINESS

BUS-02 ST Writer Elite (Good Word Pro) 'S'
This is still one of the very best WP's around written and released into the Public Domain by ATARI themselves. This vers.4 is a must
BUS-03 EZ Text+ (Working DTP demo) 'S'
Working demo of excellent DTP program (Full Version Available) see ad for ZZ Soft
BUS-06 Opus (Professional Spreadsheet) 'D'
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BUS-26 Organiser/S'sheet/Word pro +7 others 'D'
BUS-27 ALICE... Excellent Text Editor 'S'
BUS-28 Publishing Partner Fonts (8 + editor) 'D'
BUS-29 EZ-Label/Cardfile/Mailmerge + 8 more 'D'
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STE-07 Fantasia (not Tos 1.62/1 meg) +3 more 'D'
STE-08 Boing STE + Mini-Movie 'D'
STE-09 Slime Balls + An Cool Demo's 'D'
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MIDI-22 Super Conductor sequencer + utils 'D'
MIDI-09 32 Track Sequencer + utils 'S'

COMMS

COM-02 Galactic Empire... Get on-line game... You'll need two ST's & null modem cable 'S'
COM-03 Vanterm 4.0 (best PD comms prog) 'S'
Still the best PD TERM program!!
COM-04 Uniterm (Excellent terminal prog) 'D'
COM-07 Freeze Dried Terminal 'D'
COM-08 View D/L files when off-line + 4 'D'
COM-05 D-Term with Z-modem module 'S'
COM-06 Mo-Term Elite (for buffs) 'S'

ART & GRAPHICS

GRA-26 Crackart 'D'
No.1 in STR's PD Top Ten! This prog will process your pics in ways you will not believe: Curve, Twist, Wave, Tube, Palette edit, Dither, Animation and far more. Uses Degas, Neo & Tny format
GRA-24 Paintlux (full feature paint/art prog) 'D'
GRA-20 Kozmic (needs 1 Meg) 'D'
Create fantastic, colourful psychedelic patterns on your ST & save to disk
GRA-17 PAD (Mono Art program) 'D'
Absolutely the best Mono art package we've seen to date, many commercial features and the ability to hold many screens in memory (1 Meg min)
GRA-27 Mono Pictures (43 high-res pics) 'D'
GRA-10 Colourburst II (+ 5 other programs) 'S'
A very good little Art/Paint prog also on the disk: MAC to Degas converter Fine Line: art prog using Bezier/Spline
GRA-11 A.I.M. (Atari Image Processor 'D'
Exactly what it says, if you can create an image on your Atari then you can process, add or alter it with A.I.M.
GRA-14 Ani-ST 'S'
Excellent Art & Animation package that started life as a commercial art program costing £89.95!!
GRA-31 Kid Publisher & Master Doodle 'D'
A DTP package + Art/Paint program both good starting points for the kids
GRA-32 Colourspace 'S'
This is another program that started life as a commercial package now released as Shareware by Jeff Minter. Create your own colour & light show. Turn up the music, sit back and be amazed
GRA-33 Sprite Works 'D'
Art Prog geared towards creation of Sprites for use in your own programs
GRA-28 Hi-res Art 'D'
4 programs & pictures for Mono users
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GAM-22 AstroDodge/Subhunt + 10 more 'S'
GAM-28 Question of Snooker/Frogger + 1 'D'
GAM-34 X-word/Bugs/Warrior + 2 more 'D'
GAM-36 Klaxtrix/Entombed/Mr Dice + 2 'D'
GAM-38 Caves of Rigel/Froggy/Harris 'D'
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Music just for the pure pleasure of it. That's what this pack is all about, you will be surprised how good your ST sounds. 40 tracks to feed your ears.

UTILITY Pack

Here are no less than 50 utilities for countless weird and wonderful uses. Best used with your ATARI ST/E.

DEMO Pack

A feast for your eyes and ears with over 60 Demos, many doing just what the ATARI is not supposed to be able to do!!!

CLIP ART Pack

This Pack is so new that the files are not even in the main library yet!!!! As usual 7 full D/S disks only £8.99

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For Only
£14.99
★ Twinpack offer excludes library cases ★

FREE OFFER

Placing an order for more than £7.50 will entitle you to a choice of one or more of the disks in the box on the far right **FREE!**

More than **£7.50**: choose any **1 disk**
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More than **£35.00**: take all **four disks!**

1) THREE UP – 3 of the better games from the world of shareware, [illegible]
2) USA DUO – Insectroid & Cud Lee's Quest, Stateside shareware
3) PRINTING PRESS – & support disk, 2 D/S disks on 1!!!
4) GROTESQUE DEMO – demented graphics & wild music!!!

PD ZONE

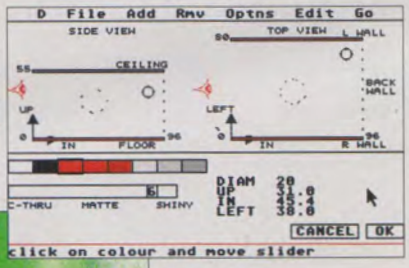
REAL RAYTRACER

THE ST CLUB • DISK NO: DRG.52 • £1.45 • MEMORY: 0.5MB • SHAREWARE • FALCON-COMPATIBLE

IN BRIEF: There's certainly no shortage of raytracing utilities in the public domain, but when it comes to ease-of-use most are found seriously wanting. The *Real Raytracer* however, is different. It features a far more commercial style interface, with menus guiding you through the construction of scenes. Special effects such as reflection and transparency are also easily adjustable.

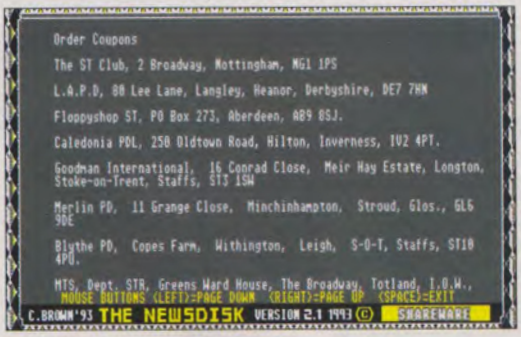
The quality of scenes produced is limited to ST low resolution, so for professional results you are still going to have to resort to QRT or POV. Speedwise, *Real Ray* is no hotshot either: even on an accelerated ST you're looking at well over half an hour per frame! The program bombs after saving a picture on the Falcon, but the extra speed is well worth the hassle of rebooting the machine!

ST REVIEW COMMENT: "If an interface like this could be bolted onto the QRT ray routines, we'd be looking at a sure fire winner. As it stands, it's a good introduction to the ray tracing world, but is just too slow and limited to take on the competition."



Very few PD raytracers can boast an interface as pretty as this, but unfortunately Real Ray doesn't measure up to the competition in terms of picture quality.

...And here is the result of your ST's hard labour. The 16 colour screen limits the quality, but the shading is quite nice.



Newsdisk's display program is probably the best to grace the public domain thus far, although it's still got a little way to go before catching up with the likes of STEN.

NEWSDISK 2.1

CALEDONIA PDL • DISK NO: DMAG.75 • £2.50 • MEMORY: 1MB • SHAREWARE

IN BRIEF: There are few better ways to exchange views and meet new contacts than through the pages of a disk magazine. The thing that probably puts most people off starting their own 'zine though is the thought of programming their own shell. *NewsDisk 2.1* takes the pain out of designing this vital ingredient and comprises two programs – one for designing and one for displaying your mag.

Creation is quite straightforward and with the articles in hand you can expect to complete the operation in around 15 minutes. Each 'zine boots up with its own Degas picture and you can also opt for a soundtracker tune if you wish. Having seen previous attempts written with STOS you might feel sceptical about the program, but give it a chance because the results are surprisingly professional. While the editor needs 1MB to run, the magazines themselves work perfectly on half meg machines.

ST REVIEW COMMENT: "There are plenty of diskzine creators kicking around the public domain and *Newsdisk 2.1* is probably the best yet, but it's still nowhere near the quality of commercial 'zines such as ST News."

The editor itself is a breeze to use. Just click "Configure Newsdisk" and follow the on-screen prompts – it's as simple as that!

CLIP IT

ATARI ST REVIEW BUDGET BUY

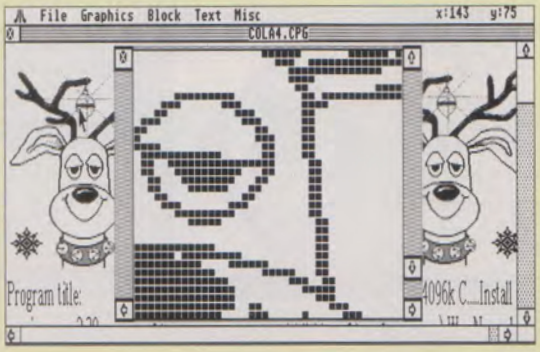
GOODMAN INTERNATIONAL • DISK NO: GD.1920 • £2.75 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

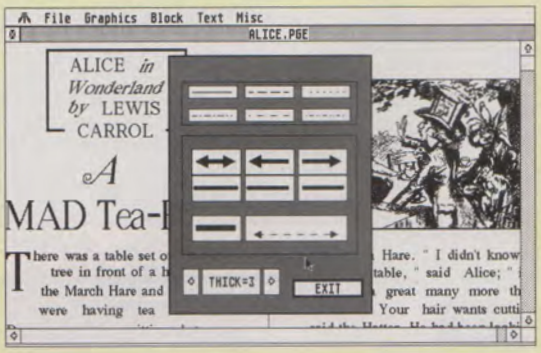
IN BRIEF: Desktop publishing, or DTP, is traditionally an expensive business with even low level packages costing upwards of £40. *Clip It* claims to be the public domain solution, and while it's not going to give *Calamus* any sleepless nights, it's surprisingly powerful for a package that costs less than £3.

Pages are laid out in a similar way to *Easy Text Plus*, the text being prepared separately and then pasted into the main page before printing. A range of simple drawing tools can be used directly on the pages for column delimiters and so on. Graphics in Degas format are supported, both standard and compressed, and by fiddling with the "graphic mode" some interesting overlay effects can be created. GDOS is used for text handling which gives you access to dozens of cheapy, PD fonts and the package runs in both medium and high resolution.

ST REVIEW COMMENT: "*Clip It* is basically a glorified paint package, but is nevertheless a very usable piece of software. The speed is astounding and providing you save regularly enough, the lack of editing abilities aren't a major concern."

Clip It is really a custom art program, but it's packaged sufficiently well to deserve the DTP description.





A number of drawing tools are available for you to use directly on the page and with a little effort some interesting effects can be achieved.

T-CAD-Y

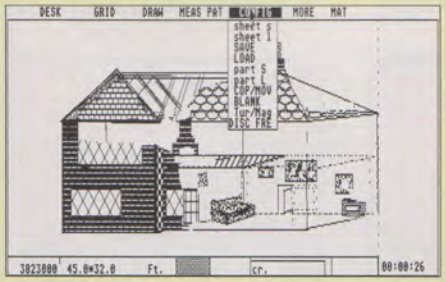
FLOPPYSHOP • DISK NO: ART.3486 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: *T-CAD-Y* (*Welsh is it?... Ed*) falls somewhere between an art and a design package. On one hand it offers you a range of sophisticated drawing tools rarely found in an art program, but on the other, unlike a true CAD package, objects can't be resized or removed without resorting to a Degas style eraser – yuk!

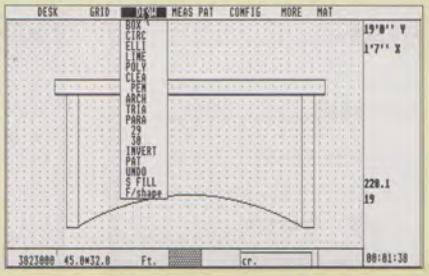
In its favour, there are are a few nice touches, such as cost calculation. This lets you define a price for various common materials and the program will automatically tot up the overall cost as you draw each shape.

The interface is of the pseudo-GEM variety and looks a bit tacky mainly thanks to the use of capital letters everywhere. The arrangement of menu options is also awkward – "Load" and "Save" for example appear as the third and fourth options under the fifth menu!

ST REVIEW COMMENT: "*T-CAD-Y* includes some nice ideas but the flaky interface and the fact that drawings can't be properly edited let the side down badly. Mind you, the author stresses that it's still in development so watch out for future versions!"



A logical menu arrangement would probably help T-CAD-Y out in the ease of use department. "Load" and "Save" in the fifth menu – I ask you!!



The range of drawing tools on offer is great, but a lack of editing facilities puts a serious cramp on T-CAD-Y's usability.

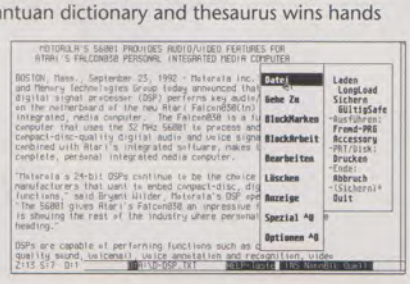
UNI-ED

THE SHAREWARE COMPANY • DISK NO: BY NAME • £1.75 • MEMORY: 1MB • PUBLIC DOMAIN • HI-RES ONLY • FALCON-COMPATIBLE

IN BRIEF: *Uni-Ed* is the public domain answer to *That's Write*, boasting a beautiful screen display, font editor and support for a number of popular printers. Perhaps its biggest asset though is speed – we are looking at one of the fastest word processors ever seen here and it certainly leaves *First Word Plus* for dead. The program is controlled via a pop-up menu and 99% of the options have keyboard equivalents.

The big cloud in this beautiful picture is the package's German origins which manifest themselves by a complete lack of English anywhere. It's not that it's that hard to use – in fact it's pretty user-friendly – but reaching for a dictionary every time you want to set the page length soon wears thin.

ST REVIEW COMMENT: "The speed of *Uni-Ed* is very tasty, but as a pure text cruncher, *DB Writer* with its gargantuan dictionary and thesaurus wins hands down. English prompts might swing the balance further in *Uni-Ed*'s direction."



Uni-Ed – extremely fast and powerful, but the German prompts used throughout limit its potential in the UK.

TOP TEN UTILITIES

1 CLIP IT • GOODMAN INTERNATIONAL • DISK NO: GD.1920 • £2.75 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

Desktop publishing, PD style! *Clip it* features GDOS font handling, support for Degas graphics, a range of flexible drawing tools and a whole lot more. With a little effort the results can look very professional indeed.

2 NEWSDISK 2.1 • CALEDONIA PDL • DISK NO: DMAG.75 • £2.50 • MEMORY: 1MB • SHAREWARE

Make your mark in the digital publishing world with *Newsdisk 2.1* – the best diskzine creator the public domain has to offer. A custom editor guides you through all the tricky bits and while the creations aren't quite up to professional standards, they require no knowledge of programming whatsoever!

3 BOINK & FAZE • FLOPPYSHOP • DISK NO: UTL.3620 • £2.50 • FREEWARE • FALCON-COMPATIBLE

Avoid screen "burn-in" with these two PC Windows-style screen savers. *Boink* is without a doubt the best, sending a range of different shapes flying across the screen if the keyboard is left idle for longer than two minutes. The configuration is adjustable via an external utility.

4 THAT'S WRITE! FONTS • THE SHAREWARE COMPANY • DISK NO: BY NAME • £3.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

A few delicious public domain fonts to spice up *Write ON!* – yours free on issue 13's cover disk! The majority are display (fancy) faces, but there are a few bread and butter lines in there too. Just copy the files to your printer and screen folders and load as usual!

5 AUTO BAK • FLOPPYSHOP • DISK NO: UTI.3619 • £2.50 • MEMORY: 0.5MB • FALCON-COMPATIBLE

Have you ever noticed how much space all those useless .BAK files spewed out by most packages are wasting on your hard disk? This invaluable little utility wheedles all of the little blighters out, no matter how deep they are nested and asks for confirmation before consigning them to that big trash can in the sky.

6 PHRAQTAL • WIZARD PD • DISK NO: ART.25 • £2.25 • MEMORY: 0.5MB • PUBLIC DOMAIN

The fastest fractal generator under the sun, with presentation every bit as attractive as its speed. Both the Mandelbrot and Julia sets can be shown and by dropping the display settings into the bottom border, the whole screen is left for the colourful world of fractal mathematics.

7 DX7 MIDI UTILITIES • THE ST CLUB • DISK NO: MID.65 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN

Two utilities aimed directly at owners of the Yamaha DX7 synth (or at least, their STs!). The first converts between DX7 and SY-77 sounds, via MIDI leads or disk, and the second is a random voice generator.

8 GST CONVERT • FLOPPYSHOP • DISK NO: UTL.3619 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

A bit of a techie one this, but still invaluable nonetheless. *GST Convert*'s sole task in life is that of translating between GST and Digital Research object files – the two formats used by the majority of compilers and assemblers on the ST.

9 UNI-ED • THE SHAREWARE COMPANY • DISK NO: BY NAME • £1.75 • MEMORY: 1MB • PUBLIC DOMAIN • HI-RES ONLY • FALCON-COMPATIBLE

A public domain answer to *That's Write!* Multiple fonts, lethal speed, and an easy to use interface are all part of the bargain, but unfortunately all prompts are in German. Its power is not in doubt, but learning another language to save yourself £50 is going a bit far!

10 MAIL MERGE • TUMBLEVANE PDL • DISK NO: SPC.01 • £1.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • FALCON-COMPATIBLE

A handy little program for use with word processors that don't support mail merge. Simply throw a text file of addresses and a template at the utility and out will pop a beautifully laid out set of circulars.

CUT OUT 'N' SEND COUPONS

Fancy some of the programs that we've just reviewed in PD Zone and PD Scene? Just fill out the appropriate coupons and send them to the library shown...

The ST Club,
2 Broadway,
Nottingham,
NG1 1PS.

ATARI ST REVIEW

NAME.....
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ADDRESS.....
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.....

- ❑ XYZ 2.01 £1.45
- ❑ REAL RAYTRACER £1.45

Tower PD,
PO Box 40,
Thornton Cleveleys,
Lancashire,
FY5 3PH.

ATARI ST REVIEW

NAME.....
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ADDRESS.....
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- ❑ PLOP £1.50

L.A.P.D.,
80 Lee Lane,
Langley,
Heanor,
Derbyshire,
DE7 7HN.

ATARI ST REVIEW

NAME.....
.....
ADDRESS.....
.....
.....

- ❑ WORLD FIGHTING CHAMPIONSHIP £1.50
- ❑ CURSE OF AZRIEL £4.00

Floppyshop ST,
PO Box 273,
Aberdeen,
AB9 8SJ.

ATARI ST REVIEW

NAME.....
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ADDRESS.....
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- ❑ RUFUS £2.50
- ❑ JEKYLL £2.50
- ❑ T-CAD-Y £2.50
- ❑ BIO-HAZARD £2.50
- ❑ FRANGLAIS COLLECTION £2.50

Caledonia PDL,
250 Oldtown Rd,
Hilton,
Inverness,
IV2 4PT.

ATARI ST REVIEW

NAME.....
.....
ADDRESS.....
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- ❑ GREY MATTER & SPLAT £2.50
- ❑ NEWSDISK £2.50

Goodman Int.,
16 Conrad Close,
Meir Hay Estate,
Longton,
Stoke-on Trent,
Staffs, ST3 1SW.

ATARI ST REVIEW

NAME.....
.....
ADDRESS.....
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- ❑ WORD FINDER £2.75
- ❑ PLAYTIME £2.75
- ❑ CLIP IT £2.75

Merlin PD,
11 Grange Close,
Minchinhampton,
Stroud,
Glos,
GL6 9DE.

ATARI ST REVIEW

NAME.....
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ADDRESS.....
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- ❑ HAGTERM ELITE 99p

Tumblevane PDL,
6 West Road,
Emsworth,
Hampshire,
PO10 7JT.

ATARI ST REVIEW

NAME.....
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ADDRESS.....
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- ❑ MURDER ON THE ORION EXPRESS £3.00
- ❑ HAMMER TO FALL £3.00

New Age PDL,
P.O. Box 30,
Leigh-on-Sea,
Essex,
SS9 4AD.

ATARI ST REVIEW

NAME.....
.....
ADDRESS.....
.....
.....

- ❑ FREEZE DRIED TERMINAL £1.50

The Shareware Co.,
51 Thornleigh Rd,
Bishopston,
Bristol,
BS7 8PQ.

ATARI ST REVIEW

NAME.....
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ADDRESS.....
.....
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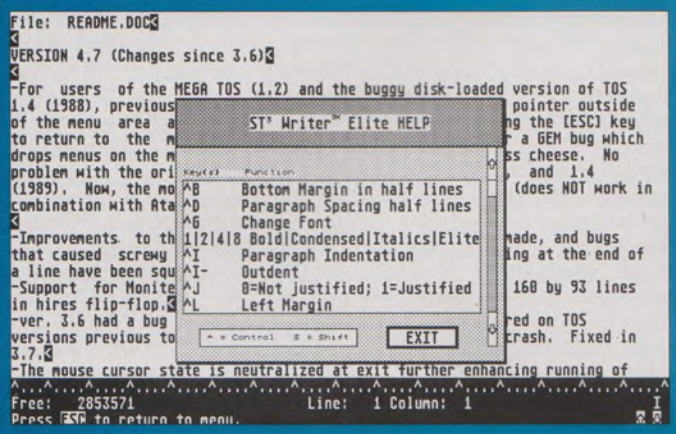
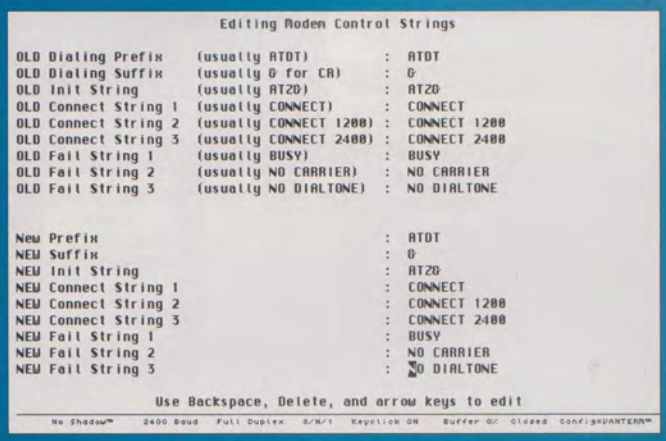
- ❑ PBM CHESS £1.75
- ❑ UNI-ED £1.75

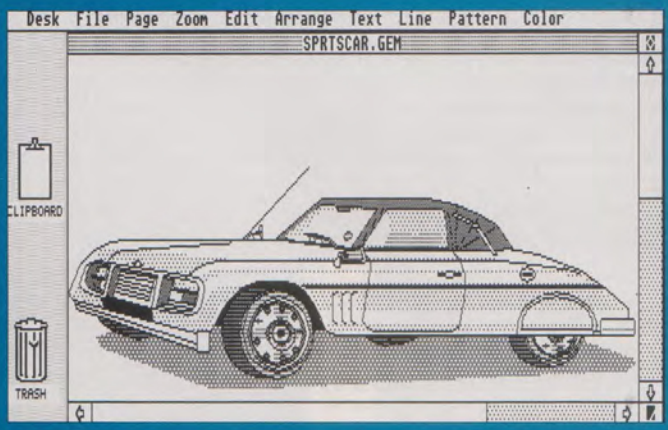
ST BUYER



Trouble with your text? Worried about your words? Just leave it to In At The Cheap End...



Learn how to set up VanTerm in our Comms Coaching section on page 80...



Easy Draw 2 can create practically unique pics on the ST – turn to page 86 for our step-by-step...

ST Buyer – your starter towards getting the best out of your computer.

In At The Cheap End signals the start of a brand new series from Andrew Wright that declares open season on any PD or commercial utility costing less than £20. Each month he'll take a working area and tell you what you need and how to use it – starting with Words on page 76.

Ofir Gal finishes programming his disk utility in HiSoft BASIC on page 83 by converting the GEM program to a desk accessory.

Having fun with Easy Draw 2 from last month's cover disk? Let the expert give you a few tips; Keith Berry shows you how to design a real character car in easy-to-follow steps on page 86.

Our regular series of Comms Coaching sees Graeme Rutt guiding you through the setting up of one of the most popular ST comms programs, VanTerm, while Mike Robinson looks at Connect, the latest package from Germany.

And, of course, there are all the regulars – Ask The Experts, Learn The Lingo, Readers' Letters and the incorrigible Blitter End...

Got a problem that needs solving? Let the experts answer it. A point of view? We'll give you our unbiased reply.

What are you waiting for? Turn over and get reading!

IN AT THE

Every month, Andrew Wright will be looking at how to use selected PD and commercial utilities that won't break the bank. Let's start with words...

For most people, word processing is what serious computing is all about. Whether it is coupled with desktop publishing for fun or for profit, or simply for writing to friends and relatives, word processing remains one of the most popular activities for ST owners. Each and every ST has a full size keyboard for typing, a printer port to which you can attach almost any printer ever made and a wide range of software to choose from. But what if your budget doesn't stretch to a full-blown word processor? And are you really using your ST to its maximum potential? Happily, the public domain libraries are full of utilities to help you get on – and a quick trawl round your local bulletin board will probably reward you with new utilities hot off the programmer's own machine. Over the next few pages, I'll be looking at some of the things you can do to improve the way you type in your words and the way they look when they're printed out. There are utilities to save paper when you print out long documents such as manuals on disk while others can improve the look of your output. There are even some that claim to make you more literate!

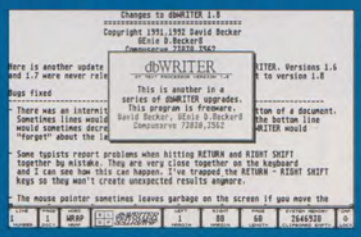
IN AT THE £ CHEAP END

WORDS, WORDS, WORDS...

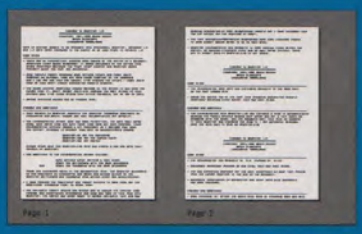
If you missed the giveaway with our May issue, there's probably still time to order a copy from the back issues department. Why? Because there's a complete commercial word processor called *Write ON* on the cover disk, of course! (For how to order it see the bottom of the page). If you're still not satisfied, there are two outstanding ones in the public domain you can try out – *Dbwriter* and *ST Writer Elite*. Both are Freeware so, they'll cost you nothing.

***Dbwriter* is an odd-looking program written by David Becker who has been experimenting with unusual interfaces such as *Zest* for some time. The current version is 1.8 and it includes a comprehensive thesaurus and 40,000 word ASCII text dictionary. It needs a 1 MB machine to run all the modules, though it will work on a 520 if you disable the dictionary, and it works in high resolution only. Other features include mail merge, page preview before printing, custom printer driver creation and scores of layout options.**

Printer drivers for the DeskJet and Epson 9-pin compatibles are available though others have to be created from scratch using the program's guidelines. The dictionary is fully editable and user dictionaries can be added too.



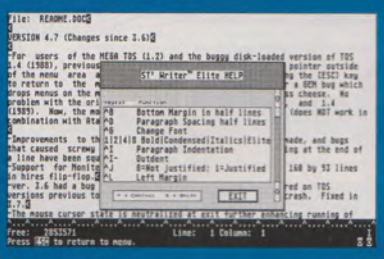
Dbwriter has a neat interface and plenty of features – well worth a look.



Dbwriter's preview facility – an excellent feature that many a commercial program should use.

The other PD word cruncher is *ST Writer Elite*, now up to version 4.8 and released into the public domain by Atari themselves. It has a less user-friendly interface but it is fast and professional with lots of keyboard shortcuts. It now supports all versions of TOS including the ST/STE and TT as well large screens like the *Moniterm* monitor.

Although it has been around since the year dot, *ST Writer* has been steadily upgraded over the years with facilities for bold, italic and condensed text, pica and elite font variations, indented paragraphs, automatic formatting, the international character set and alternate characters, headers/footers and global search/replace. It even has the facility to let you insert non-printing comments at any point in the text and the unusual ability to import *AtariWriter* files from the old 8-bit computer via disk or null modem cable.



ST Writer Elite is still going strong.

MISSED THE MAY ISSUE COVER DISK WITH *WRITE ON*?

No problem – you can still get it from our back issues department! At a cost of £4.50, including postage and packing, you can get this superb commercial word processor worth £50!

Just send a cheque or postal order to: *Atari ST Review* Back Issues, Europress Enterprise, Europa House, Adlington Park, Macclesfield SK10 4NP.

CHEAP END

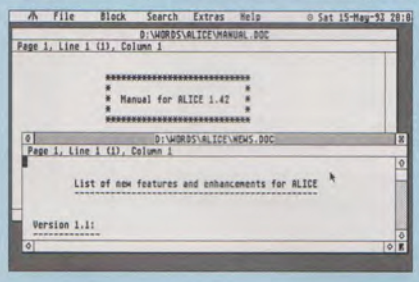
PLAIN & SIMPLE

The trouble with word processors, of course, is that there is so much to the art of word processing that they tend to be overloaded with features. Not everyone wants paragraph styles or indents. Programmers for example, tend to use quick and very powerful text editors especially if they're working in a language like C, while most other users need them on a regular basis for doing things like editing *ASSIGN.SYS* files or viewing *Readme* documents.

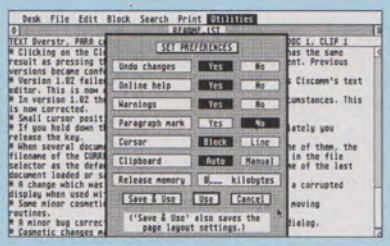
The main requirement of a text editor is that it should be fast – most of them can scroll from one end of a 100 kilobyte document to the other in a matter of seconds. Of course, this doesn't mean that the best text editors can't be used for the odd letter. Some of those described below look even more like word processors than some word processors!

One of the simplest and best text editors around is *ALICE*, an acronym for Another Little C Editor. It's a Freeware program and currently at version 1.42. It has a simple GEM-based interface with drop-down menus and allows up to six files to be open at once, each in its own GEM window. There are ten cut and paste buffers and text can be copied from one window to another quickly and easily. It works on any ST/STE or TT in any resolution except ST low and comes with a full English manual on disk. Only Epson compatible printers are supported.

It is so easy to use that it's laughable and for the odd command that can't be remembered, there is brief on-line help. Another good editor is *Scribe*.



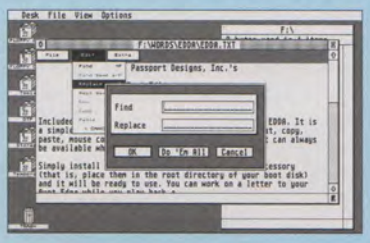
An editor like Alice – a wonderful Freeware program.



Scribe – plenty to keep you busy.

Currently at version 1.03, it works on any ST/STE or TT (including large screens) and features a solid GEM interface. Up to ten documents can be open at once and you can move between documents by hitting a single key. It is loaded with functions, from extended block commands, ten cut and paste buffers, automatic wordwrap and formatting and full on-line help.

All the features can be accessed by keyboard shortcuts and there are particularly impressive import facilities – the program automatically recognises documents with odd paragraph endings such as linefeed only and linefeed/carriage return combinations. It is a shareware program but well worth the ten pounds registration fee.

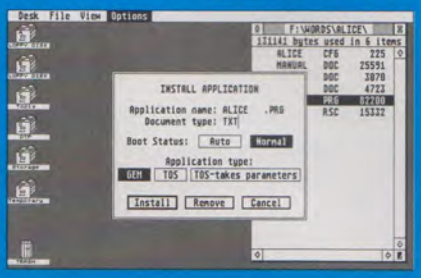


Accessory text editors can be useful too – this one is another shareware program called EDDA.

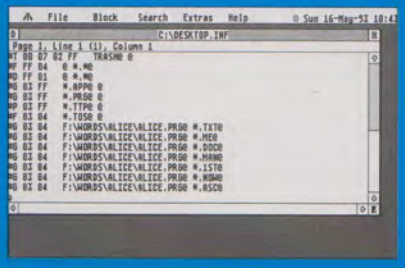
HOT TIP

One good way of using a text editor is to install it as an application for half a dozen file extenders you're likely to come across. You can do this by installing it as an application in the normal way – select the program, open Install Application from the Options menu on the desktop and type in the required extender, remembering to Save Desktop afterwards.

Then use the same text editor to edit the *DESKTOP.INF* file on your boot disk or partition and duplicate the last line, adding a different extender every time. Now, whenever you double click on a file with one of the listed extenders, the editor will load and the file will be ready to read or edit.



Installing ALICE as an application.



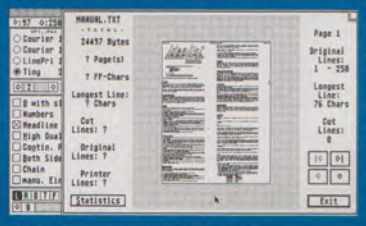
Editing the DESKTOP.INF file.

DTP WITHOUT THE HASSLE

At the other end of the scale lie the utilities designed to get the words onto paper as quickly as possible without any further user involvement. I'm referring to the many small programs that input text files and format them in a fairly standard way for the printer. All of them are designed to save space, either by printing text in booklet form on both sides of the paper or by offering various column settings and font sizes. They are ideal for PD software fiends who have to deal with a lot of *Readme* files, or programmers and database users with large, frequent printouts.

Far and away the best of the bunch is *Idealist*. It allows you to produce text in almost any format imaginable, with up to 9 columns on a page and user-definable margins and headers. It imports ASCII and *First Word Plus* files and outputs them in single or double-sided form including A5 booklets. Depending on your printer, there are several fonts available and drivers for many 9 and 24-pin dot matrix printers, the Atari laser and the HP LaserJet, DeskJet and Canon BubbleJet. It works particularly well with a LaserJet as it automatically downloads some HP soft fonts in very small sizes (or you can add your own downloadable fonts if desired).

***Idealist* comes in two versions – accessory and program – and is currently at version 3.2. It is a shareware program and although written by a German programmer, it has full English documentation that lets you customise the printer drivers and get the most from this remarkable program. The interface is very easy to use, every function can be accessed via the mouse and it will run on any ST in medium or high resolution. If ever there is an all-time top twenty shareware or PD program list compiled, this one will get my vote. Another similar program that was released in April this year is called *Pamflite*. Although nowhere near as flexible as *Idealist*, *Pamflite* is quick , easy to use – and freeware .**



Idealist – one of the best PD programs of all time?

FONTS OF FANCY

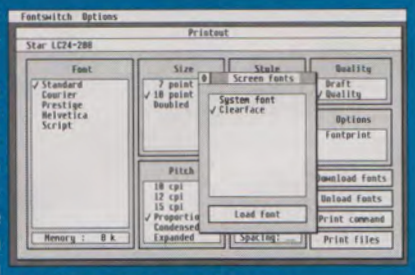
When all the typing is over and your work safely saved to disk, the problem of what to do with it still remains. Most of us have a decent desktop publishing program (I say that because there aren't any bad ones that I can think of!) but oddly enough very few word processors have the facilities for top quality output. Compo's duo, *Write ON* and *That's Write!*, are exceptions, but others are less useful.

It is perfectly possible to import your letter into *Pagestream*, for example, and print it out in a smart PostScript typeface or one of the Compugraphic fonts supplied. Doing all your correspondence this way will soon start getting tedious though. What's needed is a method of printing in good quality text from a standard word processor or text editor.

GDOS is one way – provided your word processor supports it – but it does tend to slow things down. An alternative is to use the fonts in your printer. Most printers these days have half a dozen internal fonts and accessing them is usually only a matter of changing a few dip switches.

There's a better way though. Jeremy Hughes' *Fontswitch 4* contains just the programs you need. The two are *Fontprint* and *Fontswitch* and they open up a whole new world to dot matrix printer owners.

***Fontswitch* is a utility for managing screen fonts and downloadable printer fonts. It runs as an accessory and lets you select which screen font to use and which font to download to the printer. Many dot matrix printers can't download fonts, of course, so there is also a facility for emulating this using the ST's own RAM. *Fontprint* does the printing and sits in the AUTO folder, invisible to the user.**



Adding some umph to your documents with Fontswitch...

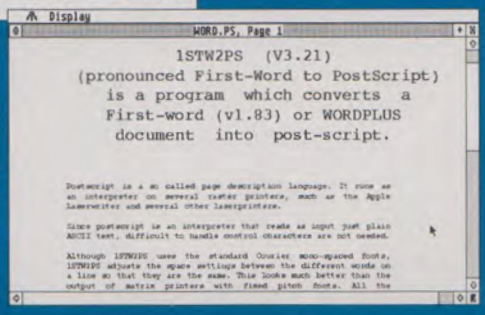
A wide range of top quality printer fonts are supplied with the program, from Souvenir to Letter Gothic and including some odd ones like Script and American Uncial. For under £15, you can suddenly add scores of new, exciting fonts to your armoury and print them out at the same speed as your normal output. It beats boring old Pica and Elite any day!

Another intriguing way of producing the best in output is to convert your word processor files to PostScript format. If you happen to have a PostScript laser, then you're probably already doing this but if you have something like *CompoScript* or *GhostScript*, you may not have realised the possibilities. *CompoScript*, for example, prints using PostScript font hints and the quality is extremely good. There's a small utility available that converts *First Word Plus* format files into PostScript format. They can then be printed to a PostScript laser or output via *CompoScript* on any device. Real quality!

The quick brown fox jumps over the lazy dog!

!"#$%&'()*+,-./0123456789
:;<=>?@ABCDEFGHIJKLMN
OPQRSTUVWXYZ[\]^_'abc

Century - you can download this font to any 9 or 24 pin printer using Fontprint.



Output via CompoScript in Courier - you could change the font quite easily in CompoScript.

A HAPPY ENDING

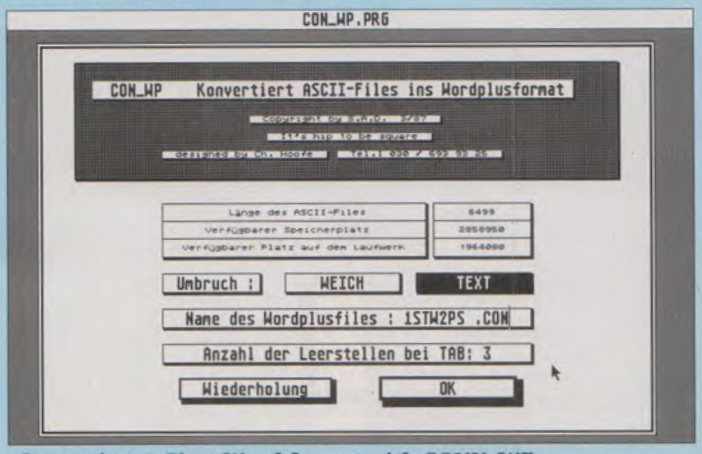
Most of you will have noticed that every now and again a document refuses to format itself in a word processor the way you want it to. The reason is that ASCII, the standard that defines the character set used by computers, failed to specify how line endings should be represented.

STs, in common with the IBM PC, use two characters, a carriage return (a CR symbol) and a linefeed (a bell), to mark the end of a line while the Apple Mac uses only a carriage return. Some software such as that from Unix computers, uses only a linefeed. Trying to convert from one to the other can be, well, trying (*tell me about it... Ed*).

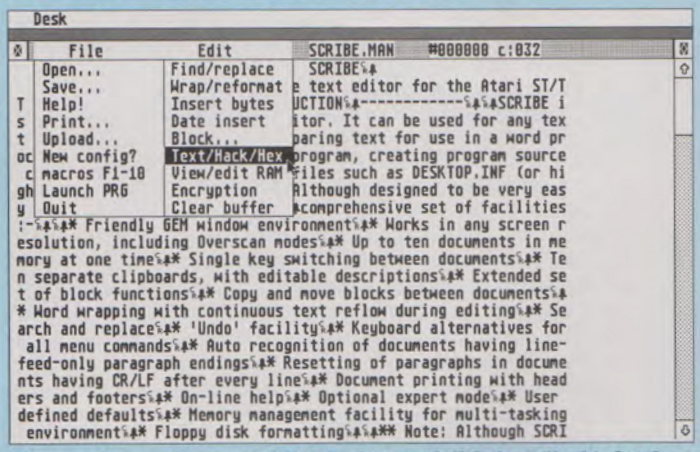
If you look at a document in your editor/word processor and the lines are shorter than they should be or every other line ends abruptly, then the program that saved the file probably put carriage returns (and/or line feeds) at the end of the line. The trouble is, when you want to edit or reformat the text, the carriage returns are still there.

There are several ways round the problem. One way is to use a utility to strip out the carriage returns – a popular one is *AJAX* which strips out all non-printable characters and substitutes spaces. The complementary program *CONV_WP* then converts into *First Word Plus* format.

Alternatively, a text editor like *Scribe* can do the conversion automatically or you can use a hacker's tool like *Edhak* to spot the spurious characters and remove them yourself.



Converting to First Word format with CONV_WP.



The carriage returns and linefeeds are visible in Edhak's hack mode.

WHERE TO GET THEM FROM

***Dbwriter*: Goodmans PDL Disk GD1672/1673 – 0782 335650**
***ST Writer Elite*: Goodmans PDL Disk GD17 – 0782 335650**
***Alice 1.42*: ST Club Disk WPR108 – 0602 410241**
***Scribe 1.03*: Compuserve, CIX or your local BBS**
***Edda*: Compuserve, CIX or your local BBS**
***Idealist*: Goodmans PDL Disk GD1601 – 0782 335650**
***Pamflite*: Compuserve, CIX or your local BBS**
***Fontswitch*: ST Club, £14.95 – 0602 410241**
***Edhak*: Douglas Communications, £11.95 – 061-456 9587**
***1STW2PS.PRG*: ST Club Disk WPD34 – 0602 410241**
***AJAX.PRG/CONV_WP.PRG*: ST Club Disk DMG12 – 0602 410241**

BORN TO COMMAND

Want flashy icons and windows on your desktop but with the flexibility of a command line? Then you need NeoDesk CLI – Mike Robinson investigates...

Before the days of mice, windows, menus and icons, a Command Line Interface (CLI) was the only way to use a computer. For instance, MS-DOS on the PC is a CLI-based operating system as opposed to the windows and icons of GEM. So why use a CLI if you have all the facilities of GEM just a mouse-click away?

Some tedious and repetitive operations under GEM can be performed much quicker with a CLI. A typical example is deleting all files with the extension .BAK in a folder called DOCS. Normally you would need to open the folder, select all the files, double-check that no other file has been selected by mistake and finally drag them to the trash icon. With a CLI, typing *DEL DOCS*.BAK* and hitting return leads to the same result...

```
NeoDesk CLI
C:\NEODESK3\ dir
    Directory of C:\NEODESK3\
 NEODESK  EXE  154317 05/07/93 11:39a
 NEODESKL RSC   39240 01/14/93  4:41p
 NEODESKM RSC   47010 01/14/93  4:40p
 NEODESKH RSC   48564 01/14/93  4:38p
 ICONEDIT RSC   14172 03/03/91  7:38p
 NEOLOAD  PRG    8649 01/22/93 12:13p
 NEO_INF  DAT     233 05/12/93  5:49a
C:\NEODESK3\ dir *.rsc
    Directory of C:\NEODESK3\
 NEODESKL RSC   39240 01/14/93  4:41p
 NEODESKM RSC   47010 01/14/93  4:40p
 NEODESKH RSC   48564 01/14/93  4:38p
 ICONEDIT RSC   14172 03/03/91  7:38p
C:\NEODESK3\
```

Listing of files with a CLI is simply a case of typing "DIR". The list at the bottom was generated using the file mask *.RSC. All output can be redirected to a printer or disk file if required.

```
NeoDesk CLI
  Popup Menu

 1: Calligrapher
 2: HiSoft BASIC
 3: Cubase
 4: Font Kit Plus
 5: Diamond Back
 6: Diamond Edge

[Esc] or [Q] to quit
```

The pop-up menu is yet another way to start applications under NeoDesk. It also has the advantage that files may be passed from one application to the next.

A CLI can do much more. Redirection is a common feature; to produce a list of all files in folder DOCS, simply type *DIR DOCS*, and a list of all files will appear on screen. To save the file list to disk, add -> followed by the name of the file to save to. You can even redirect files to a printer.

DESK ACCESSORY CLI

There are various accessory CLIs available in the public domain but they all suffer from a limitation of TOS; an accessory cannot run a program. The NeoDesk CLI is an exception – it can run any type of program, including GEM varieties, without much difficulty. This option is only possible when no other program is running, due to TOS being a single-tasking operating system.

The CLI can be brought into action automatically upon double-clicking on a TOS or TTP program, which then runs inside the CLI window. While the window can be moved and resized, scrolling is impossible and such a facility is missed when listing files.

Thirty functions are supported and over 60 commands, many of which have been added to the current version. One of the best features is the support for batch files, several of which are included on disk, and among them is a pop-up menu batch file. Another batch file searches a user-defined folder for any ARC or LZH files, runs the relevant de-archiver, passes the files to it and then creates a folder for each archive.

Batch file writing is a bit like programming but much simpler. A batch file is a collection of CLI commands which are executed in a sequence and can include the running of several programs. For instance you could run a text editor, type in some text, quit and run a DTP package, loading the text file into it. Much of the flexibility of writing your own programs is available, but without the need to learn a whole new language. Even BTP (Batch Takes-Parameters) are supported for even greater flexibility.

VERDICT

NeoDesk CLI has some unique features and many NeoDesk users will probably find it very useful. The rub? It doesn't run without NeoDesk which obviously limits its usefulness. The manual is dry and informative, but as the CLI environment is new to most Atari users, more practical examples would be useful.

A great tool for the more adventurous NeoDesk user, but limited appeal elsewhere.

NEW FEATURES

- Runs TOS and TTP programs inside the CLI window.
- Blinking cursor option
- All types of programs can be run.
- The window can be wider than in previous versions.
- Improvement to the editor.
- New type of wildcards – Unix style.
- Many new commands and functions.
- Faster batch file processing; fully compatible with v1.0 batch files.

PROS AND CONS

Runs as a desk accessory
Can run any kind of program

Needs NeoDesk
No scrolling inside window

"An ideal companion to NeoDesk if you use it, but useless otherwise"

NAME: NEODESK CLI
COMPANY: COMPO
CONTACT: 0480 891819
PRICE: £17.99
MIN MEMORY: 1MB
SYSTEM: ST/TT/FALCON

EASE OF USE	✪✪✪✪✪
DOCUMENTATION	✪✪✪✪✪
EFFECTIVENESS	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪

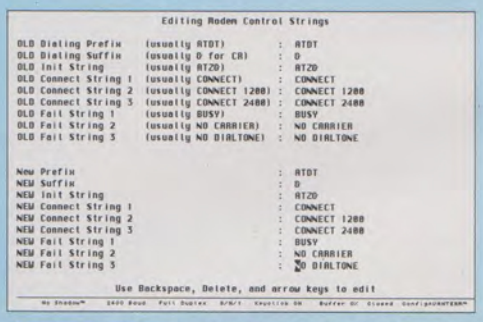
OVERALL 80%

The series that gives you a kick start in the right direction. This month, Graeme Rutt gets the best from Vanterm...

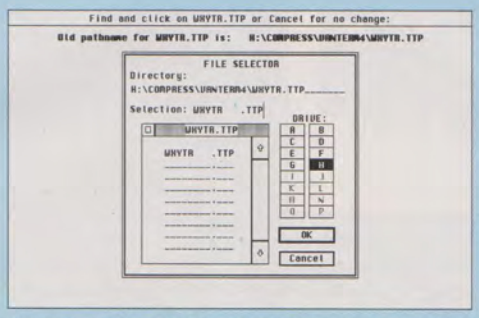
COMMS COACHING

Vanterm has been a mainstay of the Atari comms scene for a long time. It has been extremely popular among modem novices due to its easy-to-use interface but, perhaps, not so popular among experienced users due to a lack of features. The latest version (4.00), is available on bulletin boards and from public domain libraries. It has an extremely useful on-line help facility. Hitting the <help> key and selecting any menu entry will display a small text file explaining its function.

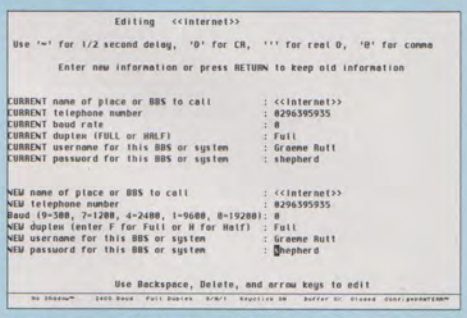
Vanterm has very little automation; once it has dialled up a bulletin board you are on your own. This makes the initial set-up easy to carry out but day-to-day use will require more mouse clicks than, say, Connect or The Freeze Dried Terminal. In the meantime, contact me as "sabbath" on CIX...



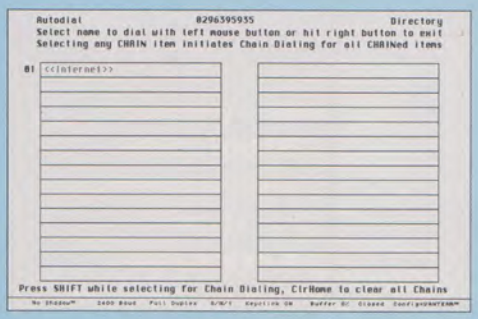
As usual with comms terminals the set-up falls into two main areas: modem settings and default paths. The initial modem set-up should work perfectly with any Hayes-compatible modem but if your modem has any idiosyncrasies, you'll have to change the initialisation string. Pull down the "Config" menu, select "Edit Dialer Directory" and then hit the <insert> key on your keyboard. The display is split into two halves: at the top there are the present settings and at the bottom the strings to edit. Change "init string" to meet your modem's requirements – none of the other strings should need changing.



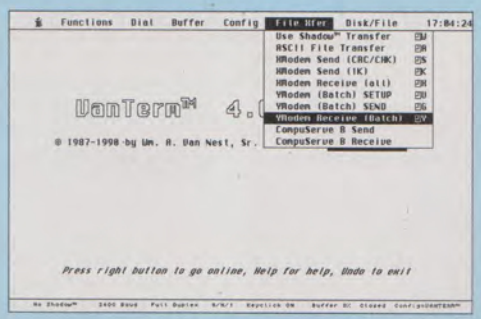
There are three default paths to change: the path to WXYTR.TTP (the file transfer program packaged with Vanterm), the path that uploaded files are taken from and the path that downloaded files are sent to. Pull down the "Config" menu and select "Set default paths. Using the file selector, find WXYTR.TTP (probably in the same folder as Vanterm) and select it. The file selector will again be shown – this time just direct it to the path you want to upload files from and hit "Okay". Finally, do exactly the same, this time choosing a path to download files to.



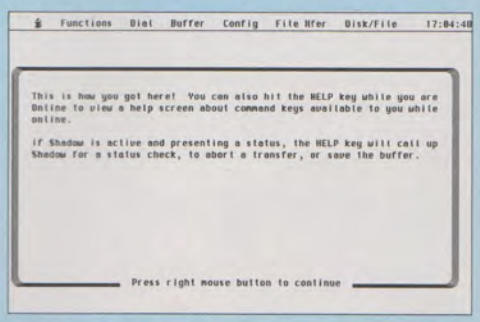
Before you dial a bulletin board, you need to set up an entry on the auto-dialer screen. Select "Edit Dial Directory" under the "Config" drop-down menu and click on a free slot. Hit the "Edit" button in the dialogue box that pops up and you're ready to create a new entry in the auto-dialer. Fill in the details in the bottom half of the screen as required. Note that the baud rate requires a single number ("0" for 19,200, "7" for 2,400 and so on) and that you should almost always select "F" for full duplex mode. Remember to select the highest baud rate that both your modem and the bulletin board support.



When you've created the new entry, hit the right mouse button to exit. Before dialing you should save your configuration, including your auto-dialer entries. Select "Save Configuration", in the "Config" menu and save your set-up under the file name "Vanterm™.Cfg". Then select the "Dial Number" option under the "Dial" menu. Finally, choose the dialer entry you've just created and Vanterm will automatically dial the bulletin board.



Once you've navigated your way through the bulletin board's log-on screen, you may want to download a file. Find the files area in the bulletin board and select a file to download. You will probably be asked for a file transfer protocol to use. Select "YModem", hit the right mouse button and then choose the "YModem Receive (Batch)" option under the "File XFer" menu. Hit "Okay" in the file-selector and the file transfer should then go ahead smoothly.



Vanterm is an excellent comms terminal to learn the ropes with. No other program has such an easy-to-use configuration or is so simplistic in day-to-day use. Combined with the very useful help feature I can certainly recommend Vanterm for the novice user.

However, bear in mind that Vanterm does not have the features you will require as your knowledge and use of comms increases – one day you will have to upgrade to a more complex package.

WELL CONNECTED

Boasting a GEM interface with lots of features and options, Connect is the new comms kid on the block. Mike Robinson gets hooked...

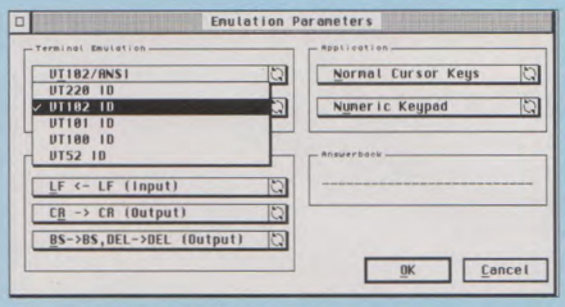
ATARI ST REVIEW
ESSENTIAL BUY

Connect comes with a host of utilities, including yet another handshake fix for the ST and a Command Line program that can generate and run scripts. The installation program is easy to use; just select the destination drive, hit "OK" and watch over 1MB of your disk space disappear...

Connect is a GEM application so all functions are accessible from either the menu bar or user-defined keyboard shortcuts or hotkeys. Setting these up is easy – select the Hotkeys menu item, select any item from the pop-up menus and define the shortcut by simply hitting the required key or key combination – every GEM program should work like this. All dialogue boxes are small windows that can be moved around the screen and every dialogue box button has a keyboard shortcut as well! The Window menu lists all open boxes and by opening the most often used boxes, and saving the settings, they conveniently appear under the Window menu – very handy when running under *MultiTOS* as well as standard TOS.

The multiple window architecture lets you open several windows, each assigned to its own port. *Connect* supports the standard serial port, the MegaSTE/TT high speed ports and even the MIDI port which can be used to quickly transfer files between two STs.

Support for the clipboard is provided by the Dial window and you can store phone numbers with a default script for each. Phone lists can be loaded and saved to disk and one of these can be designated as the default which *Connect* loads automatically. Dialling is then simply a matter of double clicking on the name of the bulletin board.



Connect features various emulation modes and even supports ANSI colour graphics on the TT and Falcon.

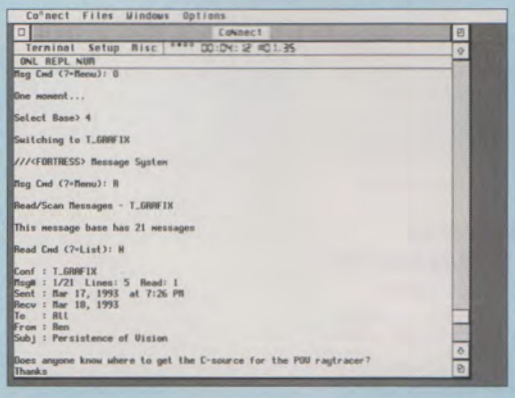
Connect also has the facility to learn your log-on sequence, allowing it to send out your user name, password and other standard info so saving you on-line time. The scripting language is extremely flexible – you could even run your own bulletin board via a script. Every call is logged so you can check how many calls you made to any particular BBS, or how many calls were made today, yesterday or last week.

Connect can call up a transfer protocol of your choice. *SZRZ* supports Xmodem, Ymodem and, more importantly, Zmodem but, if you prefer, you can use *XYZ.PRG* or *XYZ.TTP* instead.

THE RIGHT CONNECTION?

Connect is rich in features while retaining a high degree of simplicity. It's straightforward to use, fully configurable and runs quite happily under *MultiTOS* and older TOS versions. Being a GEM program, its display is slower than, say, *Freeze Dried Terminal*, but *Connect* more than makes up for this with its wealth of features. Unlike *STalker*, which can be run as a desk accessory, *Connect* cannot handle background transfers without *MultiTOS*. This is not a major concern for most users and in any case, high speed transfer is processor intensive and requires all possible processing power. The manual is about 100 pages long and takes you from the very basics of comms to writing scripts. In other words, the attention to detail is quite astounding throughout. At £30, *Connect* is well worth considering if you are at all serious about your modem...

The telephone book is as flexible as the rest of the package. Names and phone numbers can be displayed in alphabetical order and the GEM clipboard is fully implemented. The Memory box is used to dial a number of boards in rotation.



The main communications window has its own menu bar. The status bar at the top has an on-line timer and can even calculate the cost of the call.

***Connect* is available from System Solutions in the UK under a special arrangement with the author. A demo version of *Connect* is available for £3, or from various bulletin boards. This is fully-featured but times out after 30 hours of use. If you then purchase the full version, a refund is made for the demo disk.**

Simple to use
Wealth of features
Excellent user interface

PROS AND CONS

Display can be a little slow

"An excellent package for the novice and expert alike"

NAME: CONNECT
COMPANY: SYSTEM SOLUTIONS
CONTACT: 081-693 3355
PRICE: £29.95
MIN MEMORY: 1MB
SYSTEM: ALL STS/FALCON

EASE OF USE ●●●●●
DOCUMENTATION ●●●●○
EFFECTIVENESS ●●●●●
VALUE FOR MONEY ●●●●○

OVERALL 92%

ATARI REPAIRS & SPARES

★ FREE ESTIMATES ★
★ MOST REPAIRS DONE IN 48 HOURS ★
★ 3 MONTH WARRANTY ★
★ COLLECTION/DELIVERY SERVICE ★
★ FREE TECHNICAL HELPLINE ★

REPAIR PRICE EXAMPLES:

Replacement Disc Drive fitted £59.95
Replacement Keyboard fitted.....£69.95
Repair Joystick Ports.....£22.50
Repair Power Supply from.....£15.00
Boards Repairs from.....£15.00

UPGRADES:

1/2 Meg Xtra-RAM Deluxe.....£49.95
2 Meg Xtra-RAM Deluxe.....£79.95
1/2 Meg 4 Chip Solder-in Kit £39.95
1/2 Meg 16 Chip Solder-in Kit £29.95
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WORKING WITH HISOFT BASIC

Ofir Gal converts his disk utility program from last month to a desk accessory...

There are various problems involved with developing desk accessories. First, because of the structure of a desk accessory, it cannot be compiled to memory. In other words, you cannot RUN it. Instead it has to be compiled to disk and copied to your boot disk or partition. You then have to re-boot the computer to test the accessory. For this reason, a utility like *Chameleon* or *MultiDesk* is highly recommended. Both enable loading of accessories without having to re-boot. (*Chameleon is on the cover disk... Ed*)

Hard disk users need to take extra care. If the accessory contains a bug which prevents it from properly initialising, the computer will go into an infinite re-boot cycle. To prevent this you **must** have a boot configuration program like *SuperBoot* or *XBoot* installed. Floppy disk users do not have to worry about this aspect of desk accessory programming.

BUILDING A LIBRARY

Desk accessories require the installation of an additional library. The procedure is a little awkward so follow the instructions carefully.

On the original HiSoft *BASIC* disk (Cover Disk issue #4) is a folder called LIBS. Copy the folder with its contents to an empty formatted disk, or to your hard disk. If you wish, you could also use a RAMdisk which should speed things up.

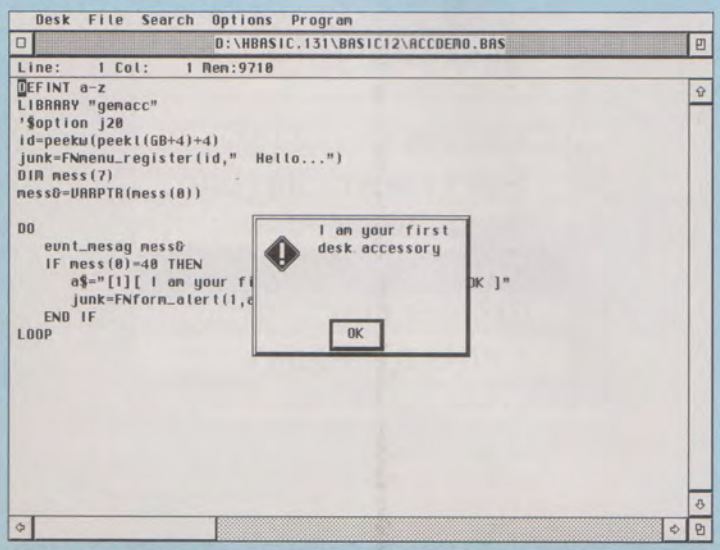
In this folder you should find a program file called *BUILDLIB.TTP*. Double click on this file and you will be presented with a command line dialogue box. Type the following line into the dialogue:

```
GEMDOS BIOS XBIOS GEMVDI
GEMACC
```

Click on the OK button and the library builder will now create a new library which contains the additional desk accessory routines. The new library file is named *HBASIC.LIB*. This library does not contain the standard AES routines so don't just copy it to your HiSoft *BASIC* master disk. First rename the original *HBASIC.LIB* on your *BASIC* disk to something like *HBASIC.AES*, then copy the new *HBASIC.LIB*. You may even have two disks with HiSoft *BASIC*, one for standard programs and the other for desk accessories.

If you use HiSoft *BASIC 2*, this procedure is not necessary.

Please refer to your manual for details.



Your first desk accessory should display this alert on screen.

```
Listing 1

'Desk Accessory startup code
DEFINT a-z
LIBRARY "gemacc","gemdos","bios" 'gemdos and bios are
required as before
'$option j20
id=PEEKW(PEEKL(GB+4)+4)
junk=FNmenu_register(id,"  Free...")
```

FROM THE TOP

There are a few fundamental differences in the startup procedure. We now use GEMACC instead of the GEMAES library and the "keep" option must also be changed to *'$option j20*. There is a special call which puts the accessory's menu item in the Desk menu. The call takes the form of the function *FNmenu_register*. This takes two parameters, the first being the accessory identification and the other the text string for the menu.

The accessory id is decided by GEM according to the total number of accessories loaded and must be inquired using the dreaded *PEEK* function. Rather than worry about this, simply insert the following line just before calling *FNmenu_register*:

```
id=PEEKW(PEEKL(GB+4)+4)
```

This line looks at an area of memory GEM uses to store various variables and is not normally accessed by the programmer. Listing 1 shows the startup code for the accessory. Compare this with the original program listings from last month. Also notice that *option y* is not required any more, because a BASIC accessory does not open a default window. Lastly, a desk accessory always looks for its resource file in the root directory of the boot drive, unless a path is specified.

STRUCTURE

A desk accessory starts at boot time. It then sits quietly in a loop, waiting for the user to select the accessory's menu entry. When this happens, GEM send a message to the accessory, informing it that its menu item has been selected. The accessory

```
Listing 2

'a demo desk accessory
DEFINT a-z
LIBRARY "gemacc"
'$option j20                                  'keep 20 kbytes
id=PEEKW(PEEKL(GB+4)+4)                       'get my id
junk=FNmenu_register(id,"  Hello...")         'set menu item
DIM mess(7)                                   'create message
                                              'buffer
mess&=VARPTR(mess(0))                         'get address of
                                              'buffer


DO
  evnt_mesag mess&                            'wait for message
                                              'from GEM
  IF mess(0)=40 THEN                          'menu selected,
                                              'open accessory
  a$="[1][ I am your first | desk accessory. ][ OK ]"
        junk=FNform_alert(1,a$)
  END IF
LOOP
```

```
Listing 3

'source code for Free
'a desk accessory that shows free RAM and disk space
DEFINT a-z
LIBRARY "gemacc","gemdos","bios"
'$option j25                          'keep 25 kbytes
id=PEEKW(PEEKL(GB+4)+4)               'get my id
junk=FNmenu_register(id,"  Free...")  'set menu item

IF FNrsrc_load("FREE.RSC")=0 THEN     'if no resource can't work
  a$="[3][ Resource file for FREE.ACC | was not found. ][ Abort ]"
  junk=FNform_alert(1,a$)
END IF

'$include free.bh                     'specify path if required
'$include hgt.bas

DIM mess(7)                           'create message buffer
mess&=VARPTR(mess(0))                 'get address of buffer

DO
  evnt_mesag mess&                    'wait for message from GEM
  IF mess(0)=40 THEN                  'menu selected, open accessory
        CALL main                     'call sub main
  END IF
LOOP

SUB main                              'replaces original main loop
STATIC x,y,w,h                        'dialogue coordinates
STATIC but                            'get memory address for the
                                      'dialogue and centre it
junk=FNrsrc_gaddr(0,form1,tree&)
form_center tree&,x,y,w,h
form_dial 0,0,0,0,0,x,y,w,h
CALL freemem
CALL driveable
DO
  junk=FNobjc_draw(tree&,0,10,x,y,w,h)
  but=FNform_do(tree&,0)
  MOUSE 2
  SELECT CASE but
        CASE test_but
                CALL driveable
        CASE drivea TO drivep
                onedrv but
  END SELECT
  MOUSE 0
  deselect but
LOOP UNTIL but=exit_but
form_dial 3,0,0,0,0,x,y,w,h
END SUB

SUB freemem
STATIC sysmem,a$
sysmem=FRE(-1)\1024
a$=STR$(sysmem)+"K free RAM"
sette_ptext freemembox,a$
END SUB

SUB driveable
STATIC i,drvmask&,drvobject
FOR i=0 to 15
  drvmask&=2^i
  drvobject=drivea+i*3
  DEF SEG 0
  IF i=1 AND PEEK(&H4A6)<2 THEN
        disable drvobject
        sette_ptext drvobject+1,""
        sette_ptext drvobject+2,""
  ELSEIF FNdrvmap AND drvmask& THEN
        enable drvobject
        drvstats i+1,drvobject
  ELSE
        disable drvobject
        sette_ptext drvobject+1,""
        sette_ptext drvobject+2,""
```

must use the call *evnt_mesag* which watches for messages from GEM. The actual format of the call is somewhat confusing, but bears some resemblance to other TOS calls we have covered in previous tutorials.

Like the GEMDOS call *dfree*, *evnt_mesag* places the data into an array. There is a major difference – unlike *dfree* which takes the actual array name as a parameter, *evnt_mesag* requires the memory address of the array instead. This is obtained with yet another BASIC call – *VARPTR*. You must therefore declare an array and get its memory address as shown below:

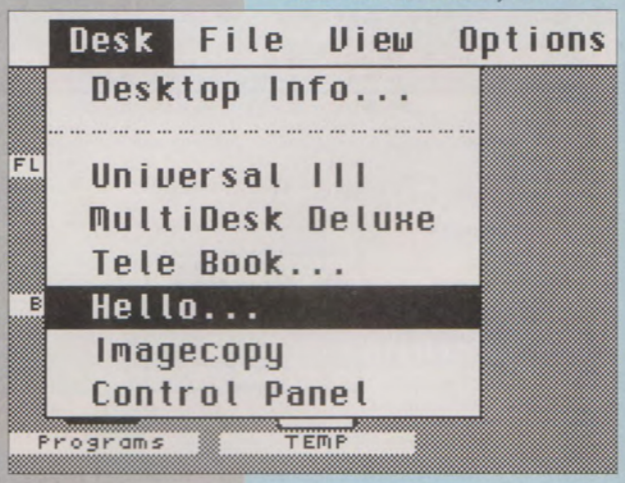
```
DIM mess(7)
mess&=VARPTR(mess(0))
```

The variable *mess&* is the only parameter needed for the call. *evnt_mesag* waits for a message from GEM and then places it in the array. In the case of an accessory the message is simply the number *40* which is placed in the first element of the array *mess(0)*. Listing 2 shows how a very simple accessory works. You may compile this example to disk and try it out. If all is well, selecting the accessory from the Desk menu should produce a friendly alert box.

As you can see, an accessory never uses SYSTEM to terminate. This is because accessories never stop, they always "sleep", waiting for the user to call them. If you do STOP or SYSTEM a desk accessory, it will become inactive and the user will not be able to invoke it again.

LINKING THE PROGRAM

We are now ready to join the rest of the source code from the previous tutorials to the accessory. Note how the various paths are handled. While *'$include* statements form part of the program and are joined with your code, the resource file is loaded each time the accessory is loaded at boot-up. Normally, the accessory will search the root directory of the boot



The effect of FNmenu_register is to create a menu entry for a desk accessory. The text string should be no longer than 20 characters.

```
Listing 3 Continued

  END IF
NEXT i
END SUB

'a routine to obtain drive info
SUB drvstats(drv,drvobject)
LOCAL dinf&(3)
STATIC cluster,free&,total&
dfree dinf&(),drv          'the actual GEMDOS call
cluster=dinf&(2)*dinf&(3)\1024
free&=dinf&(0)*cluster
total&=dinf&(1)*cluster
sette_ptext drvobject+1,STR$(free&)+"k"
sette_ptext drvobject+2,STR$(total&)+"k"
END SUB

SUB onedrv(drvobject)
STATIC drv,tmp
tmp=drvobject-drivea
drv=tmp\3
drvstats drv+1,drvobject    'call drvstats with parameters
END SUB
```

drive for the resource file. If you use a hard disk, copy the resource file to your boot partition. You may use absolute path names for all other include files. Listing 3 shows the full code for the accessory. All necessary files are found on the cover disk.

The main loop works by waiting for a GEM message. When this arrives it checks to see that it is equal to *40*. If it is, it calls *sub main*, which is almost identical to the main loop of the original program. When the sub is called, it obtains the memory address of the dialogue box and places it in the variable *tree&*. It then centres the box and calls *form_dial* to keep GEM "happy". The sub routines *freemem* and *driveable* are then called to check free RAM and disk space. The dialogue box is then drawn and *FNform_do* is called. At this point, control is returned to the user to click on buttons or exit the accessory. If the exit button is selected, *form_dial* is used to inform GEM that the accessory has finished and GEM than sends a redraw message to the current application which redraws the section of screen the accessory has used. Any other button is acted upon by calling the appropriate sub as before.

IMPROVEMENTS

Compile the accessory to disk and try the various functions to ensure they all work correctly. You will notice that whenever the accessory is selected it checks all drives. This is not always desirable – you may just want to check free memory, or free space on a hard disk. As it is, all drives are checked including the floppy drive, which is rather slow. We can't just skip sub *drivable* because it also checks for valid drives and disables objects accordingly. The simplest solution is to add a flag parameter to the sub. If the flag is non-zero the sub checks disk space; if not it will only disable objects. The modified parts of the accessory are shown in listing 4.

PASSING PARAMETERS

HiSoft BASIC supports two ways of passing parameters to a sub routine or a function. The normal way which we have been using so far is passing variable parameters. This form allows the sub routine to use the parameter as well as changing its value. There is another way which is more efficient – passing by value. A parameter passed in this way cannot be changed by the sub routine or function. This technique will speed up your programs and while not noticeable on a small accessory, it can make a big difference when creating fully blown applications.

The way a sub routine handles a parameter is included in its definition:

The parameter flag is passed by value and so the sub-routine

```
SUB dummy(VAL flag,no_of_files)
```

may not change its value. The other parameter, no_of_files is passed as a variable and as the definition name suggests, the sub-routine may modify its value.

You may want to modify the sub-routine definitions in the accessory to this more efficient format. If you do, ensure that the sub-routine does not modify a value parameter as this will cause errors.

NEW COMMANDS

LIBRARY "gemacc" – This includes the desk accessory library. The library itself must be created with the provided BuildLib.TTP.
'$option j – This option is similar to the Keep option used last month but is only used with accessories. Its effect is to reserve a specified amount of memory for the accessory while the rest is returned to the system. Failing to use this call can have disastrous effects...
FNmenu_register – A TOS call that registers an accessory's menu item. The text string should have two leading spaces and must not be longer than 20 characters inclusive.
VARPTR – A function similar to PEEK. Used to obtain the memory address of arrays.
evnt_mesag – A key TOS call which waits for messages from GEM.

```
Listing 4

'improved driveable routine
SUB main
STATIC x,y,w,h,but
junk=FNrsrc_gaddr(0,form1,tree&)
form_center tree&,x,y,w,h
form_dial 0,0,0,0,0,x,y,w,h
CALL freemem
driveable 0                        'only validate drives
DO
  junk=FNobjc_draw(tree&,0,10,x,y,w,h)
  but=FNform_do(tree&,0)
  MOUSE 2
  SELECT CASE but
        CASE test_but
                driveable 1       'do real checks
        CASE drivea TO drivep
                onedrv but
  END SELECT
  MOUSE 0
  deselect but
LOOP UNTIL but=exit_but
form_dial 3,0,0,0,0,x,y,w,h
END SUB

SUB driveable(check_space)
STATIC i,drvmask&,drvobject
FOR i=0 to 15
  drvmask&=2^i
  drvobject=drivea+i*3
  DEF SEG 0
        IF i=1 AND PEEK(&H4A6)<2 THEN
        disable drvobject
        sette_ptext drvobject+1,""
        sette_ptext drvobject+2,""
  ELSEIF FNdrvmap AND drvmask& THEN
        enable drvobject
        IF check_space THEN drvstats i+1,drvobject
'if the flag is set...
  ELSE
        disable drvobject
        sette_ptext drvobject+1,""
        sette_ptext drvobject+2,""
  END IF
NEXT i
END SUB
```

NEXT MONTH

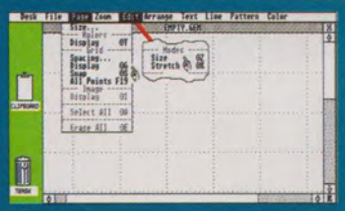
Learn how to use colour in your BASIC programs. Don't worry if you're using a mono monitor – colours simply show up as greys.

If you have any suggestions, please write in or post a message in the ST Review conference on CIX.

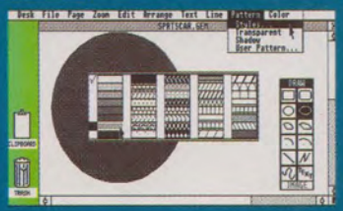
GET YOUR MOT

Still enjoying Migraph's Easy Draw 2 from the last issue? Keith Berry has designs of a four-wheel nature this time...

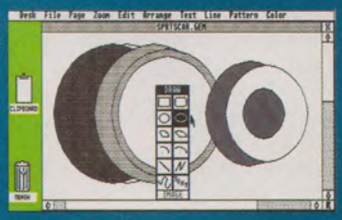
STEP BY STEP



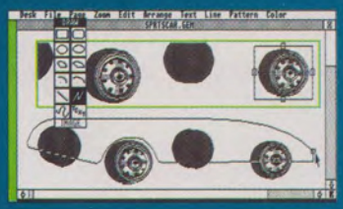
1 *Boot up Easy Draw 2 and remove the Grid Display either from the Page menu or by pressing Alt-G. Check that Snap in the same menu is off (not ticked) – press Alt-S to toggle it on and off. Select Size Mode either from Edit menu or by pressing Alt-Z.*



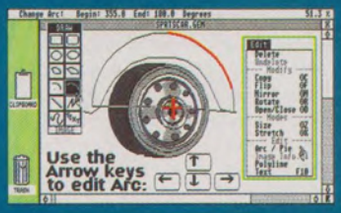
2 *Press the right mouse button or Spacebar for the drawing tools selector and choose the Ellipse icon. Move the mouse pointer from top left to bottom right with the left button held down to draw it. The right mouse button exits drawing mode. Select the darkest grey from Styles... in the Pattern menu.*



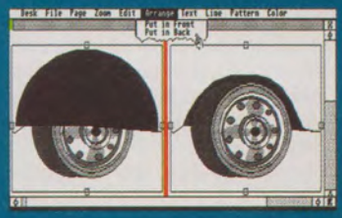
3 *This front wheel (to be copied later for the rear one) is constructed from overlapping, concentric filled and plain ellipses. The car depicted here is of no particular model so there is no right or wrong design – if your finished wheel looks okay to you then that's fine.*



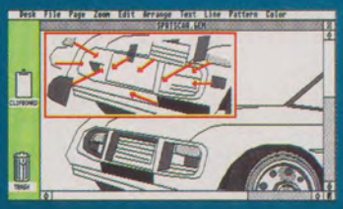
8 *Two dark-patterned overlapping discs represent the back of the offside front wheel. Group and Copy both of the front wheels and resize them slightly smaller to form the back wheels. Slide them into their respective positions and select the Polyline tool to draw the shape of the body around them.*



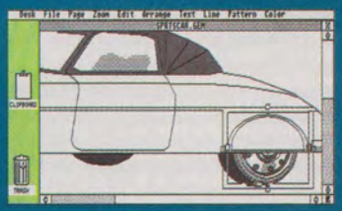
9 *For the wheel arch draw a Pie Chart from the centre of the wheel upwards and rightwards and then select Arc/Pie from the Edit menu. Experiment with all four arrow keys until the shape has filled the space under the wing. Press the right mouse button to exit Edit mode.*



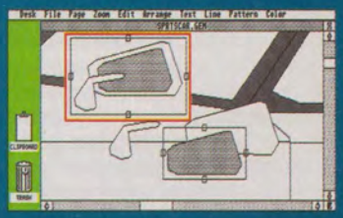
10 *Select the solid black from Styles... in the Pattern menu and then click on Put in Back from the Arrange menu so that the arch appears to be behind both the wheel and the wing. The use of such small fillets can do a lot to add depth to your drawings...*



15 *The grille, bumper and lights are made up of ordinary Lines and more Polylines, both patterned and plain. The detail of this particular design is shown exploded in the inset for better clarity but feel free to create your own designs or to reproduce those from your favourite sports car.*

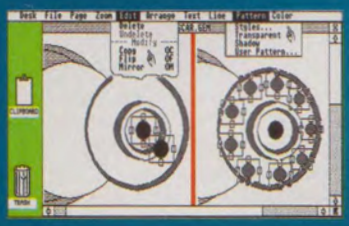


16 *Three ordinary Lines depict the hood's fold lines. For the rear wheel inspection panel use an edited Arc, as shown for the wheel arch, and then Copy and re-size it slightly smaller to obtain a double line. A small line joining the ends of the inner arc completes the panel.*

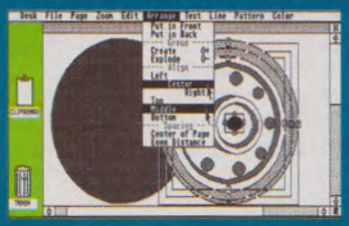


17 *The nearside wing mirror is an assembly of three Polylines as shown in the inset. To save having to continually select Put in Front or Put in Back from the Arrange menu, remember that the latest item that you draw is automatically placed in front of the previous one(s).*

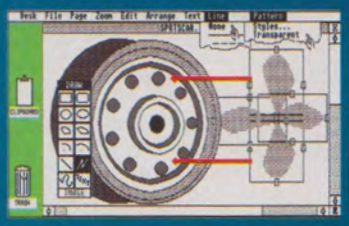
OR RUNNIN'...



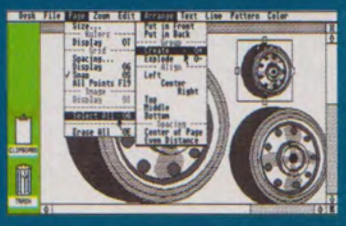
4 *Repeatedly Copy (Alt-C) your first Ellipse, resize it and choose its new pattern. Use the same procedure for the "holes" around the outer wheel disc. Select them all by holding down Shift while left-clicking on them and then press Alt + to group them and form a disc of their own.*



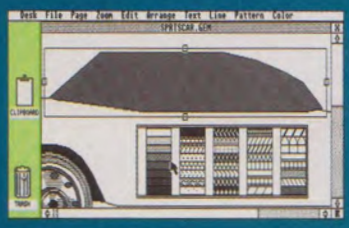
5 *Selecting and moving individual discs can be tricky, especially at first. To help you to position them concentrically, you can rubber-band all but the dark disc (depicting the thickness of the tyre) and from the Align menu select first Centre and then Middle for horizontal and vertical positioning respectively.*



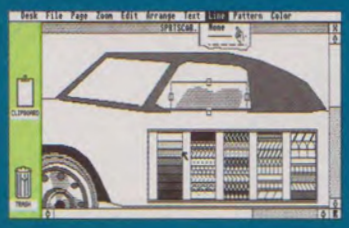
6 *A sheen can be added to the wheel by drawing a leaf shape with the Polyline tool, copying it three times and rotating the copies to form a propeller shape. From the Line menu select "None" and click on Transparent in the Pattern menu after selecting a pale grey pattern.*



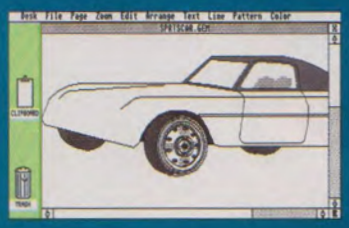
7 *There are times when the Zoom steps are too large for comfortable drawing. Selecting All (Alt-A) and Create Group (Alt +) groups everything on the page. Now you can resize (ensure that Stretch is not active!) your whole drawing to a more suitable magnification level while still in Normal Zoom mode.*



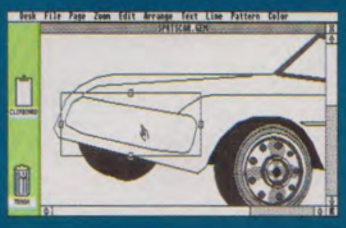
11 *Use the Polyline tool to draw the shape of the hood and select a medium grey pattern for it. Remember that, as with the body shape itself, you can always edit it later by selecting Polyline from the Edit menu. Using extra points at the drawing stage helps when editing.*



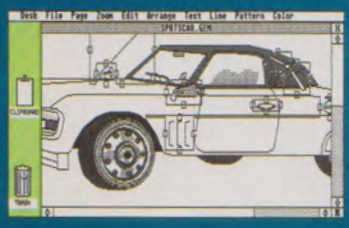
12 *Create the windscreen and side window using Polylines with plain white patterns. The seats shape is another Polyline with a pale grey fill and with the line defined as None. Note there are no "leaky fills" to worry about with Easy Draw 2, when drawn with or without a borderline.*



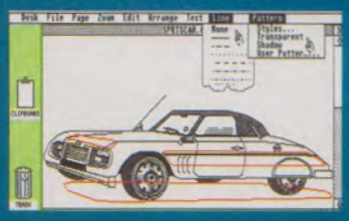
13 *More Polylines with a plain white "Pattern" are used for the door, the bonnet line and the body side trim. If you find that some of the underlying detail is being obscured by these white fills you will need to prevent this happening by selecting Transparent from the Pattern menu.*



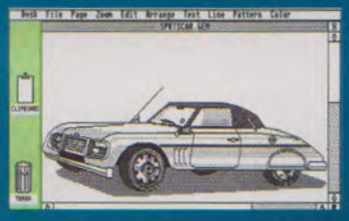
14 *Now the outline of the grille is drawn with yet another Polyline, into which more detailed drawing is to be added. Ensure that its shape and proportions look right at this point as this one will be much more difficult to edit later once the extra detail has been added.*



18 *Drawing the remaining details of the car: the windscreen wiper, offside wing mirror, aerial, door handle, bonnet louvres and so on, should be comparatively plain sailing for you by now. It will probably be helpful to Zoom in to draw most of them, or at least to help to accurately position them.*



19 *With the basic car completed it just remains to add some modelling with a few No-line, Transparent Polylines in pale grey. It is helpful to refer to photographs of cars to see where the darker areas appear. The darker shadow beneath the car will need to be Put in Back.*



20 *The finished model should now be in showroom condition. Transparent shadows are an excellent Easy Draw 2 feature but bear in mind that some DTP programs into which .GEM files can be imported tend to add border lines to them or eliminate their transparency, either of which destroys their subtlety...*

ASK THE EXPERTS

Once again, it's time to dust down our team of experts and ask them some questions...

PRINTING, CANON STYLE

I have owned a 1040 STE for some months now and although everything I have learned has come from manuals and magazines, I obviously encounter the odd problem here and there.

One problem that I can't seem to cure at the moment occurs when I want to print to my Canon BJ200 printer, whatever I have on screen. I am under the impression that by pressing the Alt and Help keys together this can be achieved, but every time I've tried this I get the screen printed in the top half inch of the page all squeezed up together.

Ken Turner, Newport, Gwent.

Yes, pressing the Alternate and Help keys simultaneously sends a dump of the screen to the printer port – in Epson 9-pin format. As your BJ200 doesn't have a 9-pin compatible mode, you simply get garbage.

While utilities exist to dump the screen to 24-pin dot matrix printers, I've checked around and can't find any programs that add this function to a Bubblejet printer.

However, all is not lost. Imagecopy (£9.95) will let you set up the Alternate and Help keys to copy the screen to memory and output to supported printers, including the Bubblejet.

Call ST Club on 0602 410241 for more information. VL

Canon BJ200 BubbleJet printer – not Epson 9-pin compatible.

VIRAL INFECTION

I received a second hand 520 STFM for Christmas and the recent owner left me an extra – a virus! I am very worried as it is chomping up important data of mine. I'm quite certain the virus was present when I first got it, although it may have been my friend's game. Can you help?

Ben Blaikie, Thornton Heath, Surrey.

Well, Ben, from what you describe, you could have any of a number of faults.

If a virus is present it is not in the computer, but on the disks as a virus cannot survive when the power is turned off.

Get yourself a copy of the Ultimate Virus Killer via our Offers pages and check all your disks as soon as possible.

In the meantime, turn the computer off between loading new programs and keep all of your disks write protected.

TK

HARD CONNECTIONS

This is the first time I've written to your panel of experts for assistance. I have bought a Mega STE (with four megabytes), SM144 monitor and a Cumana CSA354 floppy 'B' drive only a few months ago and I'm slowly getting the hang of it. The STE was supplied with a TV modulator which, I am told, is for German television and therefore is unsuitable for UK usage.

This brings me to my first query: How easy is it for an inexperienced user like myself to change the modulator over so that my Mega can be connected to a portable colour television set and how much money would it set me back? The few programs I am running are for the more serious user (e.g. *C-Lab Notator*) but my youngster would like to play his action adventure games on the computer when I'm not using it. As you already know, such games require a low resolution monitor or colour television. How about the idea of buying such a monitor and, by means of a switching box, connecting both monitors to the Mega so I can change over by the flick of a switch instead of the cumbersome way of plugging and unplugging at the back?

The second query concerns the connection of two printers. What I have in mind is the Ricoh LP1200 which represents excellent value for money. In addition to the Ricoh, I also plan to get a label printer (Seikosha Smart Label). The query is, how can I connect both up to the Mega when there's only one printer port? Unless, of course, another port can be utilised to perform the same task.

Finally, I also intend to buy a stand-alone hard disk drive of about 100 megabytes (Protar?) to compleiment the 40 megabyte unit which came with the computer for extra hard disk storage space. The ques-

OUR DUSTY PANEL...

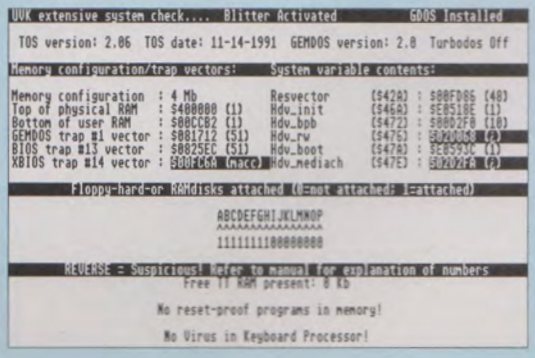
VIC LENNARD
Editor
Vic is the director of the UK MIDI Association and can help with all aspects of music and sequencing.

TONY KAYE
Deputy Editor
Our very own overworked and underpaid *(guess who wrote this...ed.)* Deputy Editor can help with the ST's operation, hardware and software along with upgrades and consumer problems.

OFIR GAL
Freelance Writer
Ofir is the expert on HiSoft BASIC. He's the man that HiSoft ask when they have a programming problem (allegedly).

ANDREW WRIGHT
Freelance Writer
A regular contributor to many ST and DTP magazines. If you need help with DTP or general printer problems, Andrew's your man.

PETER BUICK
Freelance Writer
A freelance lecturer in Music Recording Technology, Peter has been known to create various programs, music or otherwise.



The best virus killer on the ST has to be UVK.

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- Epson and IBM Emulation
- Auto Set Facility
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- Parallel Interface
- Graphics Resolution: 360 x 360dpi
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tions now arise; where can I plug it in and is it suitable for use with the STE? What I want to do obviously is partition the new drive like I did with the internal drive using the Atari Hard Disk Utilities disk which was supplied with the computer. The new 100 MB drive will then be partitions G, H and so on, while the existing drive continues to take up partitions C, D, E and F. If the proposed new drive can be easily connected, would the setting up be the same as for the internal drive and would I need to install an autoboot in partition G of the new drive?

Ultimately, I want to have the Ricoh, Seikosha and hard drive all connected up, ready to use. The modulator is, of course, optional (and so is the colour monitor), but it would be handy to know whether all this additional hardware can be run with my Mega without any ill effects.
Chris da Silva, Southsea, Hants

A UK television modulator can be fitted to your Mega, but it involves stripping the machine down to the motherboard and attacking it with a soldering iron. However, you can connect a television that has a Scart socket on the back to the ST using the monitor port. The best results are, of course, from a monitor. A switchbox is available from the Atari Workshop (081-693 1919) for the princely sum of £19.95.

Your two printers can be switched, again manually, using a switchbox. This again, is available from the above for £24.95. Cables may be needed in addition to this, though. It is possible to print using both the RS-232 (modem) port and even the MIDI ports, but these are slower than the dedicated Centronics interface.

If you buy a Protar or other proprietary brand of ST hard disk drive, it can be connected through the DMA port on the Mega STE. You will need to change the LUN (Logical Unit Number) to 1 (the internal drive is LUN 0). Once formatted and partitioned, the drive will work as normal and there is no need to add an autoboot to the external drive, as the computer boots from the internal unit.

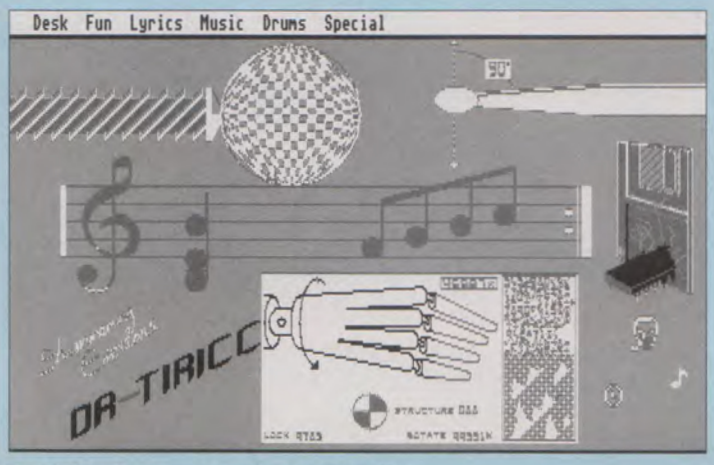
The resulting combination should not do any harm to your Mega STE. TK

DUBIOUS PROTECTION

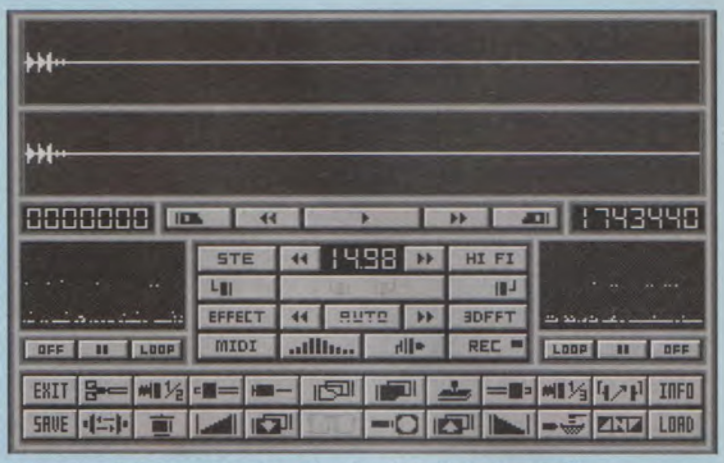
I recently read in another ST magazine that a program cannot damage hardware inside the ST. In the back of my mind, I seem to remember a music program that used a devious method of copy protection to damage certain chips. I can't recall the name of the program, only that it existed, perhaps, five years ago. Can you shed any light on this?
Jason Philips, Chelmsford, Essex

Not only do I remember the program – I wrote it! The original version of Dr Tiricc did contain a software copy protection system that could invoke hardware failure. I soon saw the banality of such a system and dropped it. The version given away with ST Review on issue 4 was naturally protection free, other than the moral protection of expecting you to buy a copy of the magazine to get the program.

Through the use of software routines in tests, I managed to cause sufficient damage on two out of my three computers to necessitate servicing. Difficult to believe? Well you have to remember that although electronic circuits are designed to carry out various different operations, they are intended to work within certain limits of software control. If these limits are abused, component failure is likely to be the result. PB



Dr Tiricc, the program that originally had quite a sting in the tail...



Microdeal's Stereo Master offers budget digital recording.

MORE HARD PROBLEMS

I have some problems concerning the new Falcon and my Atari Megafile 30 hard disk drive.

In your review of the Falcon in issue five, you told us that hard drives are connected via SCSI, and that they will "no longer require the SCSI-DMA conversion board that all ST hard drives have require". Does this mean that all ST hard drives will not work with the Falcon? If it does, I'm sure that a lot of people will be disappointed.

I would like to know if there is any way that I can use my Megafile with the Falcon. For example, could I use the bare drive from it and make my own as you have shown in issue five?

Please print this letter as I think a lot of people are in the same situation of having "ST only" hard drives.
Thomas Lee, Guildford, Surrey.

It's correct to say that the Falcon supports SCSI directly and therefore no longer requires a DMA to SCSI converter. However, the mechanism inside the MegaFile 30 is not a SCSI device. If it were, it would be possible to bypass the DMA to SCSI converter and connect it directly to the Falcon, but since it is an MFM or RLL drive, a suitable MFM to SCSI convertor would be necessary. These are no longer manufactured and are only available second-hand.

If you intend to buy a Falcon, you are much better off buying one with a built-in drive. The drives that are supplied are much faster than the old MegaFile and can cope with digital audio as well as true-colour animation. With a Falcon you are going to find 30MB rather limiting anyway. My advice would be to sell the MegaFile and put the money towards a Falcon with a built-in drive. OG

SOUND ADVICE

Could you please give me advice on sound samplers. I have narrowed the choice down to two, *Stereo Master* and *Quartet* which also includes *Playback*.

I have an Atari 1040 STFM and a 1040 STE. I would like to know how many seconds or minutes of sound I could record on each respectable package and which is the easiest to use. Also, which is the best value for money?

Oh, and by the way, keep up the good work. You make me proud to be an ST owner.
David Johnson, Chingford, London

Stereo Master is an out and out sampler; you get cartridge port hardware that can record a stereo sample and a special lead to connect this to a Walkman or the like. Only a single sample can be played. Quartet is a four-track sample playback program that uses on-screen placement of notes on a stave – you can't record your own samples but can play back up to four and 100 such samples are included free. Included with this are a further two programs. Digital lets you import and process sounds and includes pitch change and looping facilities. Voices allows you to create a set of sounds for import into the main Quartet program.

After loading Stereo Master, you'll have about 700 kilobytes of RAM left which gives you 350 kilobytes per stereo channel. The number of seconds of sampling time you get is then dependent on the sampling rate; for instance, a 10kHz rate will give you 35 seconds in total while a 20kHz rate allows 17.5 seconds. But, the higher the sampling rate, the better the play-back quality...

Quartet is different. Up to 20

samples can be included in a voice set, but the maximum size of each sample is 32 kilobytes. So, there is a distinct limitation to the size of each recording – 10kHz sampling rate gives 3.2 seconds, 20kHz gives 1.6 seconds.

If you simply wish to record your own sample and play it back, get Stereo Master (£39.95). If, however, you want to edit sounds and create your own sequences, get Quartet (£49.95). Buying both would let you record samples, edit them and play back up to four at the same time... VL

A BLIT ON THE SIDE!

I have been using the Line-A function, $A007 Bit Block Transfer in my assembler programs to access the Blitter Chip. Could you please tell me the advantages of accessing the Blitter directly over the Line-A function? Also, could you please explain how the 16 half-tone RAM registers are used and for what? Finally, what do the pattern parameters do in the Bit Block Transfer Line-A function?

Matthew Tomlinson, Kingston-upon-Hull

Your first question is fairly straightforward. There would be a very slight performance advantage, but not enough to make direct accessing worthwhile.

To answer your other questions would take a little longer. The best thing to do is to buy the Developer's Manual from Atari direct. This will tell you all you need to know about the Blitter and all other aspects of programming the ST.

Contact Atari on 0753 533344 for further details. The manuals cost from £29.99 to £99.99. TK

COLOUR OUTPUT

Could you possibly help me? I have a Star LC-200 colour printer and I was wondering if you can tell me if there is a printer driver which will make my printer output in colour. If so, could you possible tell me where I can get one and how much it would cost. I have software which will make the printer print colour but I am unable to get the appropriate driver. Will this driver possibly have the .PRT extension?

Roland Foote, Liverpool

Unfortunately you've left the most important information out of your letter – the programs you intend to use. Each program has its own printer driver that translates the program's output into terms the printer will understand. Having said that, though, if it's colour graphics you're interested in, there's really only one sensible option. Choose a dedicated printer driver program like Flexidump Plus (£39.95 from Care Electronics on 0923 894064) or Imagecopy 2 (£19.95 from ST Club on 0602 410241). Both programs will support the LC-200. It's a very popular printer, but if you're in doubt, contact Care Electronics they're, the experts.

All you have to do is save your pictures in one of a dozen file formats and then load it into the driver program. You then have total control over your output in terms of size and colour intensity. It's a little less convenient than printing direct from your paint package or whatever but it works with most programs.

Incidentally, don't get confused about the nature of a file extender. The only programs I know that use a .PRT extender for printer drivers are Pagestream 2 and Degas Elite. This is purely to help the program recognise its own drivers – neither type of driver will work with the other program! AW

SUNDAY DRIVIN'

Having made purchasing your magazine every month one of my top priorities and being an avid reader of your Ask The Experts section, thanking you for producing an excellent publication and dishing out useful, quality cover disk software is beginning to sound almost clichéd! Never mind, credit where credit's due...

One of the problems I have concerns the reading of data stored on my six-week-old Gasteiner 50 Mb Seagate Mega drive. As I think all hard drive owners will admit, that first unboxing and christening of the drive does give you a little bit of a buzz, but in my case, that feeling has since turned sour.

My one megabyte 520 STE (TOS 1.06) boots from Superboot v8.0 (highly commendable software, especially since it's shareware), into the Teradesk replacement desktop you gave away with issue nine. On my freshly formatted and partitioned drive, this poses no problem, but after a few days use (*Write On* word processing, soon to be *That's Write 1.51*) it's a different story. At any time before reaching the desktop, which sometimes doesn't happen at all, the familiar Atari bell sounds repeatedly, presumably signifying that there is a problem with reading the data files. On some occasions my Atari plays quite a tune, in reply to which the drive sends a message saying something along the lines of "Read Data Error" and then stops dead. I then have to initialise the drive through the software supplied. Removing the *Teradesk* software seems to have alleviated the problem to a small extent. I only have this trouble with boot-up software in the "C" partition, regardless of the partition's size. I also find that the bad sectors seem to creep in at an all too worrying rate.

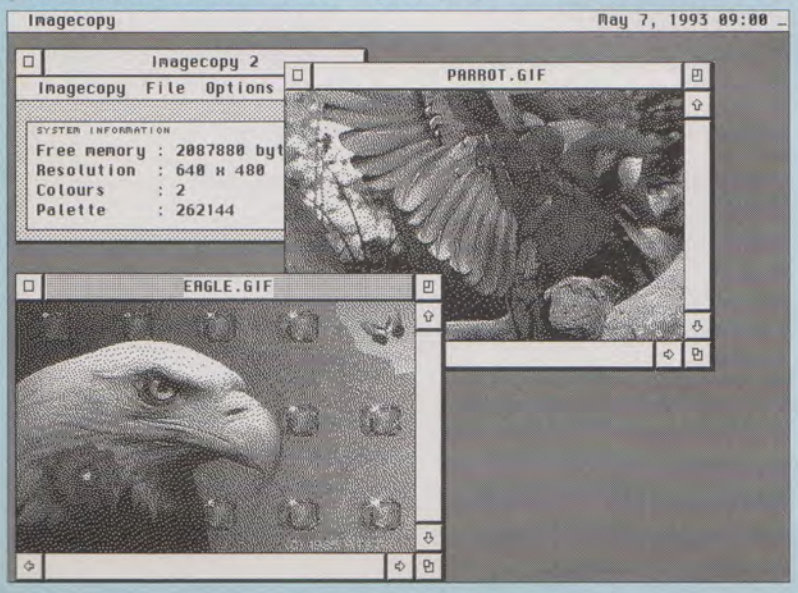
Partition size leads me to my next query. A short while ago, I decided to divide my drive into six partitions with the "C" drive just 2.5 megabytes in size and concerned with booting up only. Having done this, I decided to check for bad sectors on the drive. To my amazement, the software crashed out while checking "C" with the message "Too Many Bad Sectors". Considering this to be a little irregular, I 'phoned Gasteiner and arranged to take the drive in to them the next day. They were most helpful and re-partitioned it (into the default, three 15 Mb partitions) and found no bad sectors. Annoyed with myself for going to London to let Gasteiner do what I could have quite easily have done at home myself, I once again tried to get a 2.5 Mb drive C:. Hey Presto! "Too Many Bad Sectors" again. If the partition size stays larger than about 3.5 Mb, things seem OK. Surely, regardless of formatting, a bad sector is a bad sector and once on the driver, shouldn't come and go as it pleases?

Any ideas of what's going on? Is it me, my drive or do I have some Commodore Gremlins in there TOSing around with my pride and joy?

Steven Constantine, Beaconsfield, Bucks

It sounds like you are one of the unfortunate STE owners who ended up with a faulty DMA chip through a batch of STEs sold about 2 years ago. The problem was difficult to pin-point because it only showed up when the STE was used with certain kinds of hard disk.

The DMA (Direct Memory Access) chip is responsible for various memory related processes inside your computer, hard disk data transfer being one of them. If it fails to perform correctly, you end up with read/write errors as well as bad sector reports. If your hard disk had this many faults, they would certainly show up when connected to another computer. The DMA chip is located near or under the floppy drive. If it carries the serial number C025913-39 then you should contact Atari UK and ask for a replacement chip. If they cannot help you, you may have to buy one from the Atari Workshop (081-693 1919). OG



Imagecopy 2 – the perfect utility for handling colour screenshots...

LEARN THE LINGO

This month's look at the terminology of computing concentrates on Word Processing...

ASCII

All word processors should have the option to save ASCII text. This is a standard format that allows you to exchange files between different programs and computers typically using the "Save As ASCII" option in the "File" menu.

CLIPBOARD

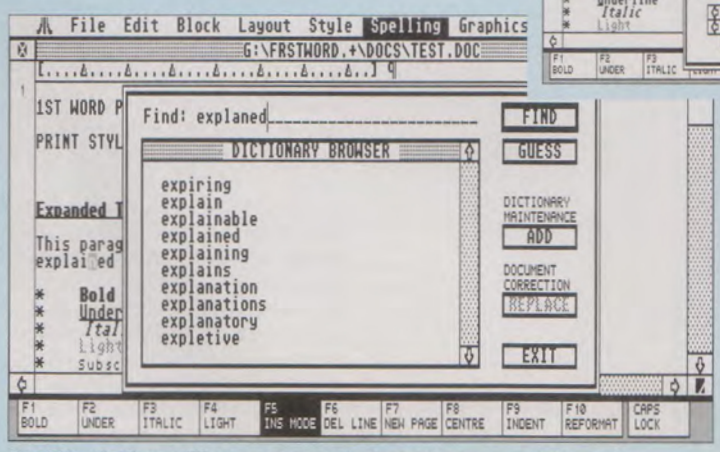
The ability to cut text from your document and move it to a different position involves storing it temporarily while you work. This "part-time disk drive" is called a clipboard.

CUT AND PASTE

Text can be cut (or deleted), moved, copied or even saved to disk as a separate file using these very powerful commands. The cut portion is held in memory by the clipboard and is deleted when a new piece of information is received. Some word processors will store several pieces of cut text.

DICTIONARY

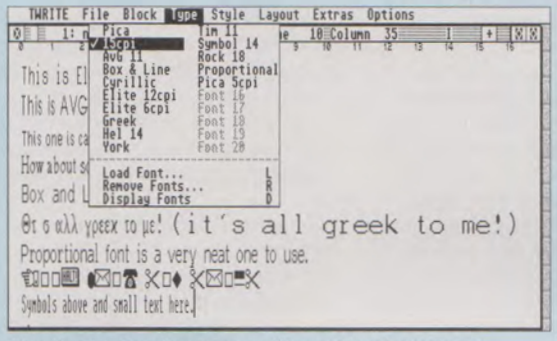
It's important to create a good impression when you send letters. One way to ensure a professional result is to check all spelling before printing. Most word processing packages have at least a spell checker – some have a full dictionary available.



1st Word Plus will even guess what word you want to use!

FONT

A font is a set of letters with a particular appearance and name, Helvetica and Times being two very popular varieties. Most word processors will let you change the font to taste – *That's Write 2*, for example, has space for 20 different fonts given sufficient memory.



The font selection screen from That's Write 2.

FORMAT

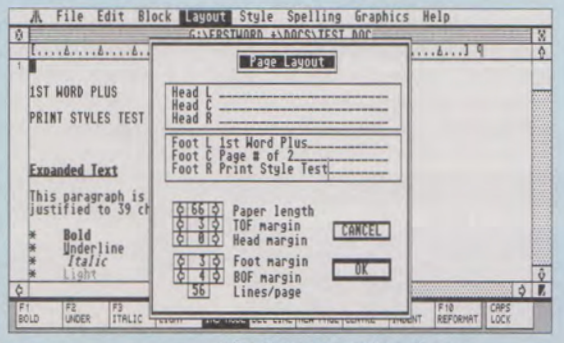
Here's a word with a different meaning to the one you are probably used to – formatting text is not the same as formatting a disk! This option is used to control how text is placed on paper, or to change the style of a document before you print it.

GRAPHICS

Most word processors will let you import pictures into your documents, although the type of picture may vary. In most cases, the picture will have to be in the same resolution as you are currently working in.

HYPHENATION

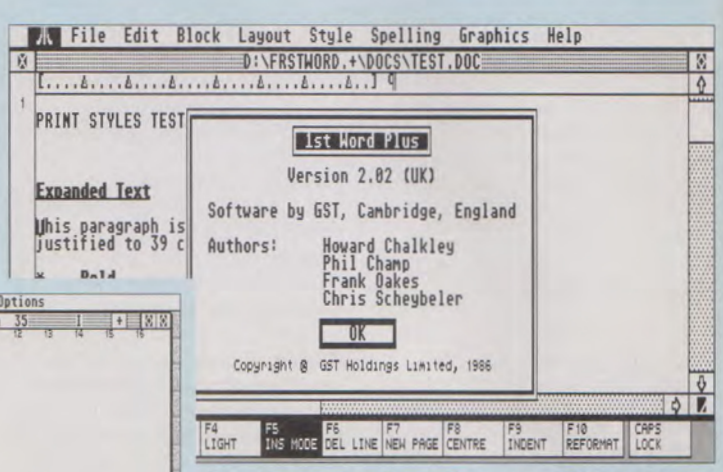
If a word is too long for a line, you have the option to start it on a new line or split it into two parts with a hyphen in the middle. The choice is usually presented as a menu option after which it takes place automatically.



The layout option from 1st Word Plus.

LAYOUT

When processing documents, you can decide on the design of the page and store it as a layout, or template, for future use. The information you need to store is the default text style, page size, text position on page (commonly called *justification*) and space at the top and bottom of the document.



Word processing has a language of its own!

MAIL MERGE

One of the features of word processing is the ability to send standard letters to different people and personalise them. No-one likes to receive a letter addressed to "Dear Sir" or "Madam". Mail merging uses a simple database for the names and addresses, and inserts them one after the other on identical copies of a master letter.

PRINTING

When you have finished typing your document, you need to print it. Some programs like *That's Write 2* let you preview the finished page before printing. Most offer a "WYSIWYG" (see below) display to give you a pretty good idea of the final result to save you wasting paper...

STYLE

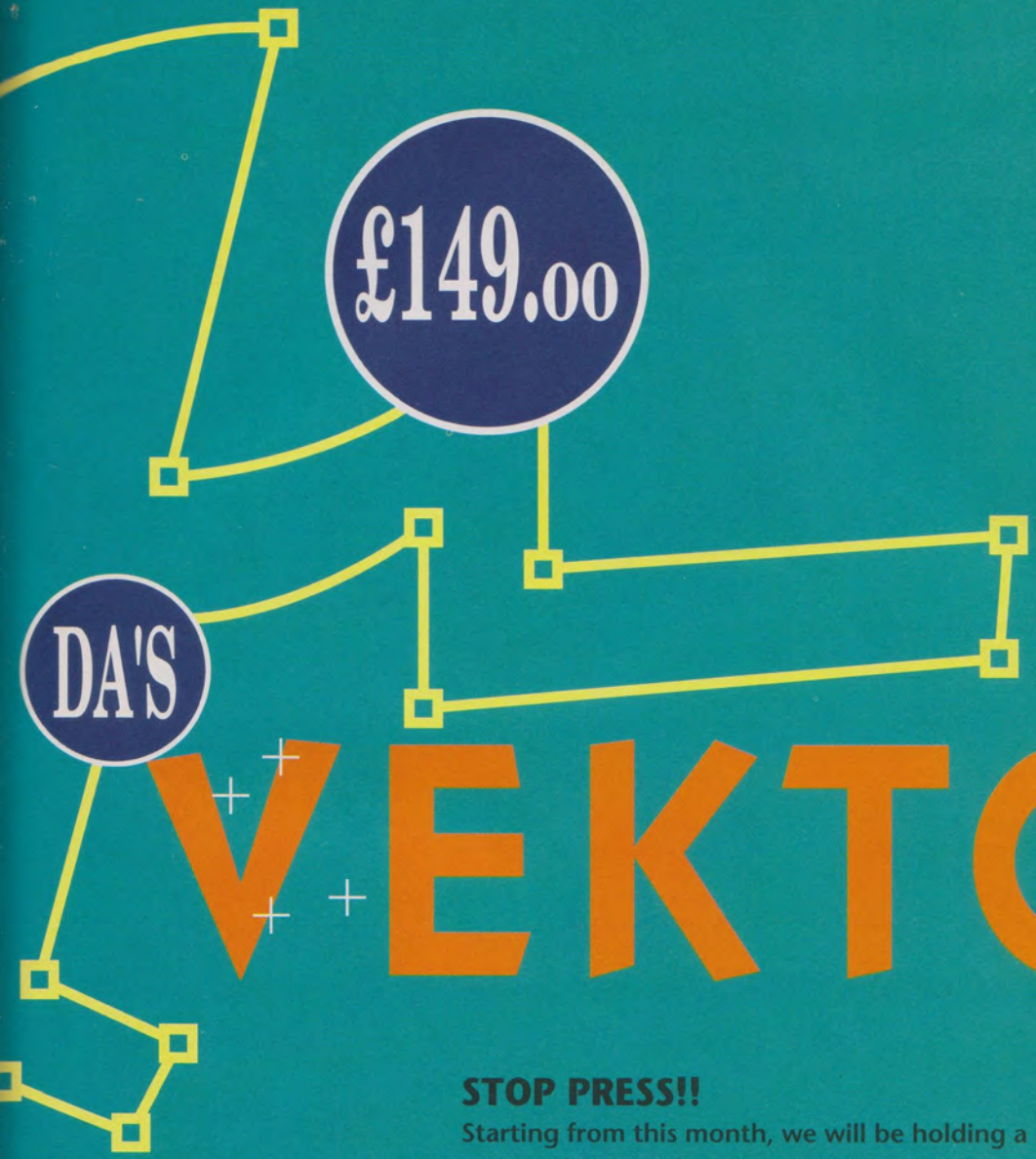
After choosing a font, you can change the style of the text. You may want to underline a heading, highlight a company name in **bold** or inform someone of the name of a book in *italics*. All of these can be selected from the style menu in your word processor.

SUPERSCRIPT AND SUBSCRIPT

These are small letters added above or below the line. Commonly used for adding items like footnotes to your text.

WYSIWYG

Acronym for *What You See Is What You Get*. A word processor of this type has an on-screen display that accurately reflects the print out. It's a good way to work as you can format your page as you go along.



CGS ComputerBild
19 Ledbury Place
Croydon
Surrey CR0 1ET
Tel: 081-686 8121
Fax: 081-666 0405

STOP PRESS!!

Starting from this month, we will be holding a series of comprehensive training workshops for Didot Professional, Retouche Professional and DA's Vector, in our London office.
Each workshop will take approximately four hours, and will be charged at £49.95 plus VAT.
Also special offer this month only...
10% off our normal prices for Epson Scanners!
Please phone for further details.

DA's Vector

"Stunning colour and special effects – quite simply the best vector graphics creation tool on the ST." Atari ST Review. This is what enthusiastic journalists have to say about DA's Vector. We haven't space to mention the 3D text effects, 3D bar charts and pie charts, animation, and what we call "Vector Morphing"
£149.00 inc V.A.T.

The Dream Team

During the 1992 Olympics, the USA used the best basketball players in the world to form the ultimate team. Which soon acquired the title of the "Dream Team". Now CGS-ComputerBild bring you the best in Desktop publishing, and Image retouching at the unbeatable price of £299.00 inc V.A.T.
This years 1993 "Dream Team".

Didot Professional + RETOUCHE Professional = £299.00

Didot Professional Colour and Retouche Professional Colour Design £499.00 inc V.A.T. We also supply the Epson range of colour scanners: e.g. Epson GT6500 with GT-Look II software only £938.83 inc V.A.T.
All programs run on the Atari ST(E)/TT/Falcon.

Got something to say? Here's your chance to tell it to the Atari world – you may even win a cash prize!

LETTERS

MONITOR THE SITUATION

The following may be of interest and prove to be a lesson to other readers. It is now known that Atari is not, at present, producing high resolution mono monitors and other suppliers are attempting to fill the gap. These suppliers have all advertised in the April or May issues of *ST Review*, but have you tried to obtain one? I did, from two different sources (names supplied).

The first one took my order and agreed a delivery day. When it did not arrive, I telephoned and was told that the order should not have been accepted as there were none in stock!

The second one said they could deliver and, again a day was arranged and again the monitor failed to appear. The reason given was that the badges were not available to fit to the monitor, but delivery would be the next day. Guess what? You're right, it didn't arrive then, either.

The frustrating thing is that I wasted four working days sitting at home on the strength of promises to deliver and as the final insult, neither of them even had the decency to apologise for their failures.

The moral of this story is to establish that a company has a product actually in stock without someone's name on it that can actually be sold to you. Don't fall for the "it will definitely be in stock tomorrow" routine.

I have now placed an order with a third firm and am living in hope of a delivery as promised!

John Davies, Sale, Cheshire

This situation should never arise and we agree with you that suppliers should not take orders for products they can't deliver.

If a company has a new product and wants to take advanced orders, it should be done on the basis that they will not cash your cheque or process your credit card payment until the goods are ready for despatch. They should set a deadline for delivery and, if necessary, inform you of when it's due to arrive. This gives the buyer the opportunity to cancel if the goods are not ready within a reasonable period and the seller to withdraw if the product does come in and is not up to the standard required.

If only some dealers were more honest with customers. Some of them just don't seem to realise that we are all human and accept that things can go wrong. All that's needed is a telephone call to let us know and we're usually happy instead of being left in the dark and kept waiting...

MORE NOISE FROM THE WRINKLIES!

I was very pleased to read B. A. Wallcroft's letter in issue 13, although at 52, B. A. is still a Junior Wrinklie!

Perhaps there are a few more wrinklies out there who would like to talk computing now and again. If there are, maybe we could form a Wrinklies Club. We could operate by mail and, maybe later, by modem (if our pensions will allow!). I am sure that between us we could show the younger set a thing or two.

Myself, I am interested in all the serious aspects of computing:- Programming (*GFA BASIC* and *STOS*), DTP and so on.

If anyone is interested, perhaps you could pass on my name and address so that we could get together?

Thank you for the *Write ON* package on disk 13. I am using it to produce this letter and find it quite simple to use.

James Hornby, Abbey Wood, London

We're always pleased to hear from people getting enjoyment from their ST, at any age! If you are interested in forming an "ST Wrinklies Club", why not write to James at 60, Crumpsall Street, Abbey Wood, London SE2 0LR.

FLYING BLIND

First of all may I congratulate you on producing a great magazine which I find very interesting and informative to read.

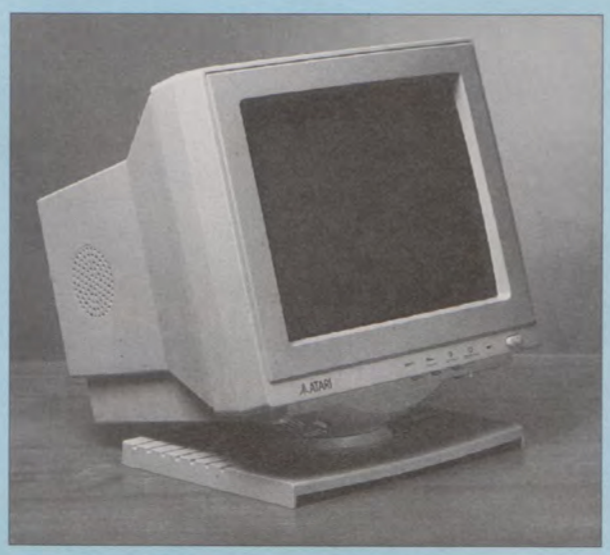
I have had my 520 STE since Christmas and since that time I have learned more from your magazine than from all the books which I have read. Also through your readers offer pages I have been able to upgrade my computer to one megabyte. Thank you.

Next, I have a problem which I hope either you or other readers may be able to help me with. At Christmas I was given *A320 Airbus* flight simulator as a present. I was over the moon as this is my favourite type of game. That was until I opened the box and, to my dismay, found that a set of airway charts and the registration form were both missing.

I have now on two occasions contacted the company who produced the simulator (Thalion) in Germany, but as yet, in the six months, have not heard from them at all.

Could you please tell me if this is common practice for software companies to produce games for the market, or is Thalion just being downright ignorant in not acknowledging my correspondence with them?

I have been tempted to buy the



Atari's SM144 mono monitor – a dying breed?

North American edition and the Landing Simulator, but if this is the sort of service that one gets when dealing with a German company, they can go to hell! I am sure that Boeing or McDonnell Douglas could produce a simulator which would grab the market.

If you can suggest what else I can do to get a set of airway charts and a registration form, I would be most grateful

Peter Curtis, Hounslow, Middlesex.

The main problem here is that you've been trying to deal with Germany when there is a UK agent for Thalion. Try ringing them on 021- 442 2050. You will probably be asked to send your original disks before anything will be sent out. This is to prevent piracy.

We're obviously pleased that you find the magazine informative. Perhaps you'd like to have a word with Mr. Franks! (see Star Letter)

AVAST YE LANDLUBBERS!

I am writing to you concerning a subject that has received much publicity over the past few months and will probably continue to do so.

Shareware and PD programs can often be up to commercial quality.

The subject in question is piracy. Although I don't encourage piracy in any way, I can't help feeling some sympathy for those that do pirate software. I don't mean those that pirate a game, take all the protection parameters out of it and then distribute it to as many people as possible. The people I am talking about are the younger computer users. These people either save for months, even years to buy their computer, or it is bought as a present. This is fine, but what happens when they get bored with the pathetic games that come with their system? That's when the trouble starts. They want new titles and, at around £20-£30 a throw, it's quite understandable when their parents say that they can't afford it at the moment.

It's OK to say that they will just have to go without, but what is the point of getting the computer in the first place if they can't play games on it? This basically leaves them with two options – either they can save up all their pocket money for the next five or six months, which means going without something else they might want or need, or they can borrow some games from their friends.

Now, assuming that he or she borrows a few titles from a friend. They play them and then realise that these new games are the best thing since sliced bread. The temptation to copy them must be almost unbearable. I know, I used to when I was younger! So they copy the games and this copying leads from just a couple of titles into the tens and twenties and so on. This is what the software companies are all complaining about and blame the high price of computer software on this kind of "innocent copying", a phrase that I coined myself. Sure, I understand that software companies

A WORD OF COMPLAINT

Just a little egg on your faces I think. Myself and many others I presume are just a little upset with your magazine. From issue one, paying four pounds for a twin disk seemed a good idea, as was the quality of the software on them. Then issue 12 appeared with only one disk and a slight reduction in price. Most people thought "Yes, OK, they're planning a surprise for their birthday issue."

What a surprise it was. Not only did it have fifty pages less to read comparing it with back issues, but a fully working package worth a white elephant, as Write ON was given away with a rival magazine months ago! It also seems that your magazine has a deal with Atari to promote the Falcon.

To be quite honest, if your next few issues are like your birthday issue you will soon be partying alone.

If this makes "Letter of the Month", send any proceedings to your research and development department. They apparently need it more than I do!

Why not do a survey with your readers and ask who can afford a Falcon? You may find that with the re-release of the 520 STFM at £159, you are trying to support a minority at the expense of the majority, which, of course, will reflect on sales!
R Franks, Royton, Nr Oldham.

Let's get the facts right first. Issue 12 had a single cover disk and the same cover price due to EMAP's desire to financially milk as much out of their last issue of ST Review as possible. The appearance of issue 13 led to a reduction in price and the return to commercial software. You talk of the "quality of software" in the early issues. Really? The first three issues primarily had games and demo programs – it took until issue 4 to get the first serious program in the form of HiSoft BASIC. Did you complain during the first three issues? Probably not.

Yes, the first issue had 180 pages, a number that slowly decreased to the current page count. Starting off with such a high pagination nearly led to the demise of ST Review; the Managing Director of EMAP Images has gone on record as saying that the problems with the magazine were caused by an unrealistic expectation of sales and too high overheads caused by the size.

ST Review is currently a 100-page magazine, written by quality, enthusiastic journalists and edited with integrity. The current shape of ST Review is here to stay; plenty of reviews, tutorials and features with a decent balance of games and public domain.

The last two cover disks also show the direction in that area – commercial software where possible. While Write On had appeared on another magazine's cover disk a year ago it did so without the overall package that we had on offer, including an upgrade to That's Write for £24.99, a saving of £40. Have you thought that part of the reason for this was to appeal to all of those people buying 520STFM's at £159?

So we have a deal with Atari to promote the Falcon do we? You must be one of the very few people who didn't manage to read my editorial underneath the label in issue 12. Had you done so, you would realise just how scathing my attitude towards Atari is.

That said, the Falcon is a damn good computer and has to be written about – or perhaps you would prefer us to hide our heads in the sand and wait for the so-called "consumer" model to appear. Wouldn't you prefer to know about the various products before deciding whether to buy a Falcon or not? Issue 13 dedicated just five pages to the Falcon although we now inform you whether reviewed programs will run on the new computer.

I've made this letter of the month for two reasons. First, I want to make it clear that criticisms will be answered head on – letters such as yours will not simply be consigned to the bin. Secondly, I'll take great pleasure in donating the £25 to Esther Rantzen's "Childline" rather than sending it to someone who has written a letter such as yours...

probably do lose thousands of pounds in revenue every year, but on the other hand, I believe that if they brought down the price of their titles to a more realistic and affordable level, then the majority of these people that copy titles would no longer feel the need to do so. I know all this has been said before, and will probably be said again and again until the software companies get off their backsides and actually listen to the people that play their games, because it is our money that lines their pockets.

Nintendo and Sega are currently under scrutiny over the prices they charge for their cartridges, so why can't the governing body put pressure on these computer companies to reduce their prices? I, personally haven't bought any commercial software for around five months now. That doesn't mean that I've been pirating the stuff I use, I've actually been using public domain titles. They offer a wider range of subjects and cost about the same as a blank disk. I know you might not get all the snazzy graphics and digitised sound effects, but I am glad to sacrifice all those things if it means me saving £20 or £30. If the software companies don't start doing something soon, I think a lot more people will opt for PD and shareware title, which will mean them losing even more money. So come on, you multi-million pound companies, wake up to yourselves and do something positive.

Mark Bryant, Leighton Buzzard, Beds.

Piracy is piracy, no matter how you disguise it. However, if you think that a reduction in software prices will stop it, think again.

The programmers who crack programs and pass around unprotected software often have no interest whatsoever in the actual programs they are distributing. They get their pleasure from cracking a program before anyone else. It doesn't matter whether the game costs £500 or 50p.

Computer programs are generally becoming more affordable with budget games and PD software, but the problem of piracy will continue as long as software is produced on disk. There is no real answer.

Perhaps it's an indictment on our society that the moral obligation not to steal software holds little water any more. Although a reduction in price may help, it won't stop the problem.

PC, OR NOT PC?

I am writing in response to the letter from Mrs C. Wood who, in April's issue, extolled the virtues of an ST for business use. I'm afraid that she's now a bit behind the times, as are many in a similar situation.

I am a huge fan of the ST having invested around £3,000 in them in the last three years, and heaven knows how many tens of thousands of hours (ask the wife!). But times have changed.

My decision to go Atari was an easy one. Three years ago, PCs were too expensive. A 286-16 was then the bees knees, and with a hard drive and DOS ran in at around £2,500. The new 386 was a dream at around £1,000 more. A four megabyte ST with a hard drive, in comparison, came to something like £800 – no contest! Plus the fact that the Atari had a Mac-copy graphic interface. The command line structure of the PC (Windows was just emerging) gave me the creeps. I wanted to be able to use my computer to do things, I didn't want to learn a foreign language first!

Also the ST software was affordable. A top word processor was less than £100 and graphics and images were plentiful and cheap. All PC software seemed to cost between £200 and £300 a go!

I now use an extensive Atari setup (partly out of nostalgia, but also because the architecture is stable and direct) and also a 486-33 PC. My main usage is in business letters and graphics, forms, and so on, but just check out the difference...

For the same price as a two megabyte STE with hard drive and medium resolution colour monitor, you can buy a 386 with a hard drive, DOS/Windows and VGA colour. The STE runs at eight MegaHertz, the PC is twice as fast at 16 MHz. The colour capabilities of the STE in comparative resolutions are much poorer. The PC allows several programs to be run at the same time and the Windows environment means that items can be cut and pasted from one application to another, while the relevant programs are running. The Atari font usage is both sad and dated. GDOS will allow various applications to share one set of fonts – bitmapped fonts which need a separate font file for each size and look dreadful. In order to have crisp fonts, specific vector font applications need to be used, each with their own sets of fonts, which is highly inefficient. The PC needs only one set of fonts, which are then able to be used by all the applications installed on the hard drive. An Atari equivalent of this, which would be the TT, would cost perhaps around £2,500.

Add to this, finally, the comparatively much lower cost of PC "add-ons" such as hard drives and the fact that competitive Atari software now sells for more that double the cost of the PC equivalent (check out *Calamus SL* vs *Pagemaker* or *Retouche Pro Colour* vs *Photostyler*), and the equation has become so lopsided as to be silly.

OK, so you happen to have an Atari anyway, you might as well put it to good use, and if you plan to work at the top end of publishing, an Atari-fed imagesetting process will save money, but for 99% of the public who need a computer for "serious" use, the Atari is as much use to them, as things stand, as a car with no wheels.

I still use my Atari regularly as there is a large degree of compatibility, and some applications are, well, more direct, being simpler! I would have gone for a Falcon like a shot a year ago, had it been available and had it been available with a PC emulator. I suspect that tens of thousands of other folk would have, too. A machine at home that will run the same software as the office and that the kids can use and at the same price as a PC.

Sorry, good as I think the Atari is, it is subject to market forces that dictate that the more products produced, the less each one costs to make, and that makes Atari in 1993 non-competitive!

Rob de Wet, Stoke-on-Trent, Staffordshire

No-one will disagree with the basic premise of your letter – the PC offers good business software. But perhaps you're missing the point of Mrs Woods' letter. If you have a computer – any computer – it's far more sensible to use this for as many different applications as possible rather than purchase new hardware, unless you're running a serious business of course. A small business can certainly be set up cheaply starting with a decent word processor and a dot matrix printer. The public domain sports a good range of databases, label printers and other essential utilities – check out the first article in our new ***In At The Cheap End series on page 76.***

The Atari STE – a jack of most trades where a tight budget is concerned...

"SERIOUS"

Firstly, thanks to Europress for saving *Atari ST Review*. I always read *Atari ST User* (and have done since the *Atari User* days) and I hope that both magazines can live together in harmony under the same roof!

I no longer buy *ST Format* because of its lack of content in all departments and childish reviews. It's nice to know that there is a magazine which takes a professional approach to the ST/Falcon with not too many games reviews. Not for a long time have I looked forward to my next monthly ST magazine. Now it seems too long to wait for *ST Review*.

Congratulations also for the best Falcon review. The PCB pic was very good. Is there any chance of another look at the consumer model (not the German machine)? How about this time, reviewing the manuals and starter pack, as well as a compatibility chart of all the ST software that will work on the UK version?

Is there also any chance of a larger news section with a New Products short list (for the month of...) and US news? Maybe also a monthly chat to a leading industry figure, his or her views on the ST/Falcon, plans and his or her advice for Atari, etc.

Anyway, thanks for the best magazine. Keep it up.

Karl Morris, Co. Wicklow, Eire

Thanks for the vote of confidence! A conscious editorial decision was taken a few months ago to review Falcon software as and when it became available but to limit articles of a purely technical nature. After all, a decision to buy a Falcon is likely to be based on the availability of new software as much as on the compatibility of existing programs.

Making certain that every aspect of an ST program works on the Falcon is very difficult and is the main reason why we haven't compiled a list yet. The number of utilities and other serious PD programs that appear to function properly on the Falcon is impressive.

Fortunately, we're starting to see the emergence of games on the Falcon that use the eight channels of digitised audio as well as 8-bit colour.

We're about to start a US news section, having just found an Atari enthusiast in the States, and while we'd like to increase the news coverage, there just isn't a great deal of it to write about! As for the monthly industry figure, we'll be interested to see how you enjoy Through The Keyhole from now on...

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To order your copy of Family Roots, send a cheque or postal order for £24.95 to the address below. UK postage free, please add £1.50 for Europe or £3 for rest of World.

A disk with usable demos of Family Roots, Around The World, Stone Cold Sober and Professional Virus Killer is available for £1.

Around The World

Around The World is an arcade adventure for the Atari ST and STE in which you assume the role of Phineas as he negotiates his way through 40 taxing levels. The game features a large playing area, devious puzzles, creeping fungus, rock falls, explosions, an original soundtrack and a 50 entry high score table. Please note that Around The World will not run on TOS 2.0 upwards.
To order your copy of Around The World, send a cheque or postal order for just £9.95 to the address below. UK postage free, please add £1.00 for Europe or £2.00 for the rest of the World.

Stone Cold Sober

Stone Cold Sober is a graphic adventure for the Atari ST, STE, TT and Falcon. It runs on colour or mono displays (without the location graphics in mono) and is ideally suited to the novice adventurer. As the name suggests, you start your quest in a pub. Your journey will take many weeks to complete and will involve a considerable amount of thought and a lot of luck. There's an element of the supernatural in this one so beware! The program is entirely mouse driven and involves almost no keyboard input at all. Stone Cold Sober was written by Simon Brown, one of the best adventure game authors of recent years and it promises to keep you glued to your screen for weeks (months perhaps)! To order your copy of Stone Cold Sober, send a cheque or postal order for £9.95 to the address below. UK postage free, please add £1 for Europe or £2 for the rest of the World.
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COULD IT HAPPEN?

While trawling around one of the American bulletin boards, a rather interesting message was found, an abridged version of which follows:

"In a ground-breaking move, Atari Corporation and Commodore have announced a joint venture into the personal computer arena. The former competitors claim to have realized the futility of trying to compete against each other for 'niche' markets and have decided instead to 'team up and have a go at Big Blue.'

The new computer is called the **Atiga**, and is said to combine elements from both the ST and Amiga lines, as well as several new features. For starters, the new machine will be based on the Intel 80286 processor.

'The 68000 family is dead,' claims an Atari spokesperson. 'The original plan was to make the Atiga PC compatible, but about halfway through the project we decided on a new operating system based on the HP-41 handheld calculator. Text is entered in a modified RPN (Reverse Polish Notation) in which words are entered first and then all punctuation is added at the end of a sentence. It's much faster when you get used to it,'.

In addition, the Atiga is said to borrow sound and MIDI capabilities from the Amiga line and graphic capabilities from the Atari ST. 'We wanted to build on the Amiga's success in the music market and the ST's popularity with video production companies,' said a Commodore spokesman.

The Atiga will be available in two configurations. The first is a one-piece model with integrated monitor, keyboard and CPU which will ship with no RAM, though an Atari spokesperson mentioned that he thought that RAM boards might be provided by third party manufacturers at some future date.

The second configuration features a CPU and a unique Direct To Brain (DTB) interface. Although still in early testing, the DTB interface is connected to the user via two probes and Input/Output is established through a combination of brainwaves and biorhythms. One probe is attached to a collar fitted around the user's tongue, but spokespersons would only giggle when asked where the second probe was connected.

In an unusual move, the two companies have announced the availability date of the computer to be three weeks ago, with production scheduled to begin by next Autumn. In the meantime, a media blitz is planned to start immediately with adverts in supermarket magazines..."

Comments on a postcard, please...

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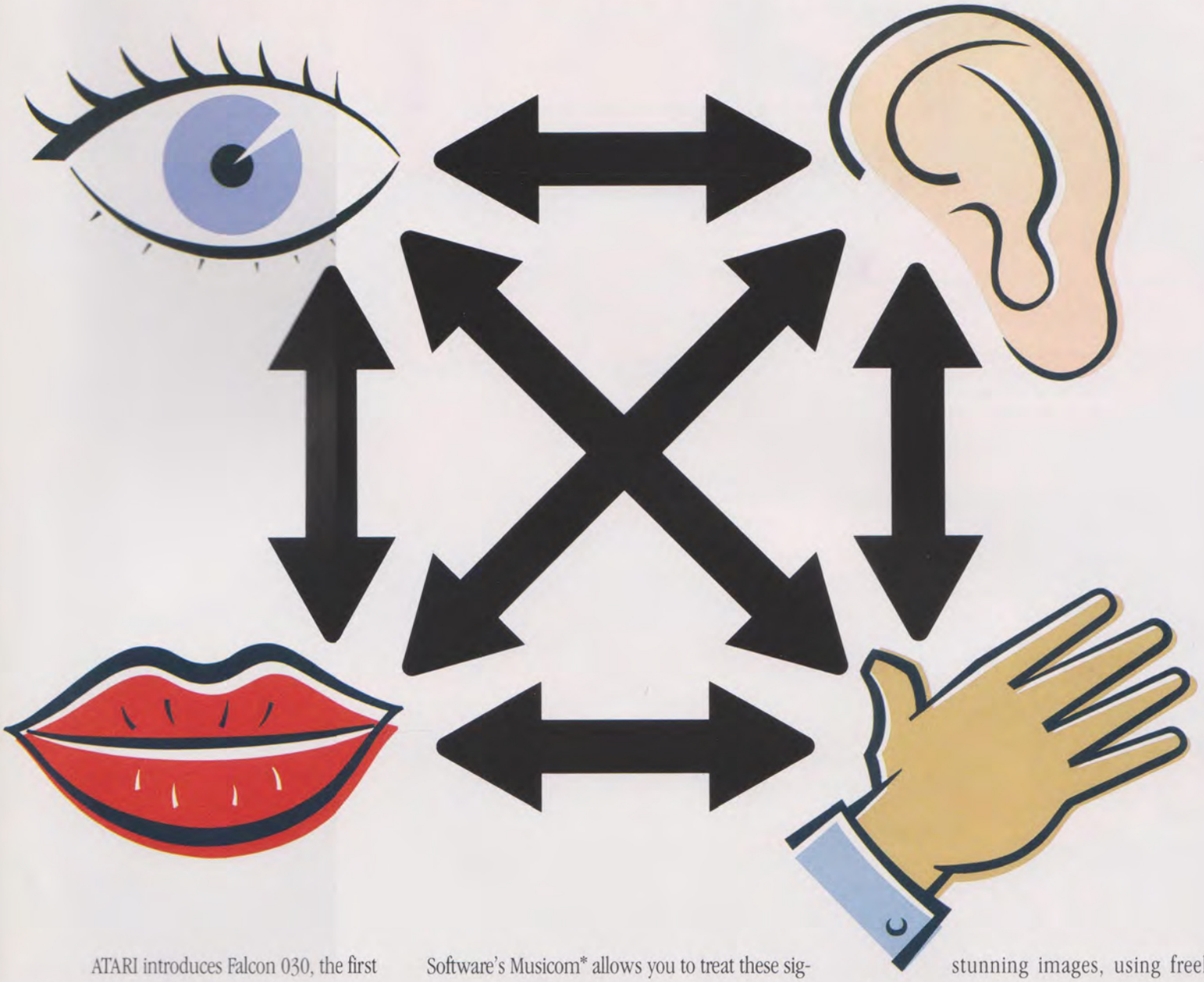

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Falcons from HiSoft

Yes, we have them - now! In what is an unusual step for us, we have decided to stock both the 1Mb and the 4Mb/65Mb HD versions, the retail prices of which are £599 and £999 inclusive.

We have un-rivalled (in the UK at least) knowledge of the Falcon hardware, its operating system and the tools that will be available for this amazing machine; in addition, we firmly believe in quality of customer service, both before and after a sale. So why not give us a call to discuss the benefits of this superb new computer and how it can best meet your requirements?

Language News

Watch our for new versions of our popular languages; Devpac 3, HiSoft BASIC 2 and Lattice C 5. These latest releases include full Falcon030 support with extra libraries, an improved debugger and a comprehensive handbook that discusses using these products on a Falcon computer.

The new libraries include routines for accessing the video and audio sub-systems, Speedo GDOS, MultiTOS, the DSP processor and other new aspects of the Falcon030. As such they are essential for any programmer with a Falcon computer or for anyone who wants to support this fabulous machine.

These Falcon-enhanced versions will be stickered as such on the outside of the box (an example is shown below) and so will be easily recognisable. Upgrade prices start from £10 for each product - please call for details.

The Falcon030-enhanced sticker that will appear on all our software packages that include special features to take advantage of the Falcon computer.

Speedo GDOS and MultiTOS

At long last, both MultiTOS and Speedo GDOS are available in the UK. MultiTOS is Atari's official pre-emptive, multi-tasking operating system allowing you to schedule a variety of tasks on your computer. Speedo GDOS is the new outline font system based on Bitstream's Speedo font engine.

Both programs are released on 22 May, require upwards of 2Mb of memory and are complete with manuals and free 30-day support from HiSoft.

TruePaint

TruePaint is the first art package to take advantage of the true colour capabilities of the Falcon030 computer ... and it is shipping now. Some of the highlights of the product are:

- *Works on all STs and Falcons in all screen resolutions including 768x480 True Colour*
- *Easy-to-use multi-window environment with menus, toolbox and keyboard shortcuts*
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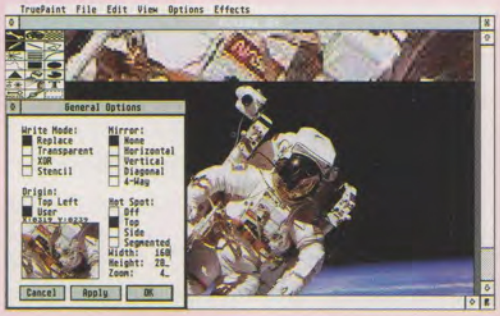
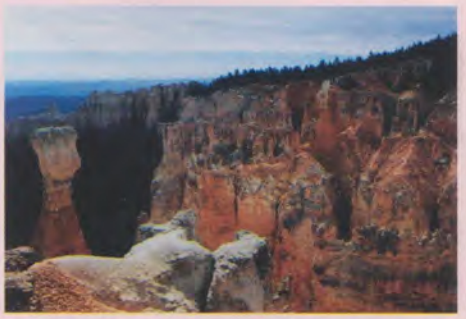
- *A large variety of effects including shear, wrinkle, smooth, rainbow etc.*
- *Flexible zoom, full screen mode with edit, colour picker, bézier curves ...*
- *Animation, Font/Speedo GDOS support, wide variety of file formats including IFF, TIFF, GIF, JPEG, Targa, IMG, Neochrome and more*
- *Extensive and informative 170-page manual*



TruePaint was launched at the 7th International Computer Show and has already gained wide acclaim from its users. For more information, please call us and ask for a brochure.

Diamond Edge

From the authors of Diamond Back, the popular hard disk backup program, comes a new package that is essential to any serious user of an Atari 680x0 computer.



Diamond Edge is a complete set of management, optimisation, diagnostic, repair and data recovery tools for use with floppy disks and hard disks. Version 1.04 is now available, this supports the IDE hard disk within the Falcon030 - call for upgrade details.

The current version of Diamond Back, 2.51, has full support for the new 21Mb flopticals - again. contact us for information on upgrading.

DataLite 2

We are pleased to have acquired the exclusive rights to this new program from Germany.

DataLite is a sophisticated 'disk doubler' which, by using a combination of compression & de-compression techniques, can save up to 50% of the space on your hard drive or on your floppy disks. We have thoroughly tested this invaluable program and we have found it to be extremely reliable and easy-to-use.

DataLite compresses all types of data on your disk, not just text files, and thus gives you optimal space saving. DataLite is a logical companion for Diamond Edge and Diamond Back II and we have a special, limited offer for a combined pack of all three utilities (see the box below).

Harlekin 3

The latest upgrade to the immensely popular Harlekin suite of desk accessories is released on 22 May. The package has been much improved and extended including non-modal dialogs, a multi-window editor, full Multi-TOS and Falcon030 support and a new manual. Please call or write for full details and upgrade information.

Special Spring 93 Prices from HiSoft

As a very special mail order promotion, we have reduced the prices of some of our software titles for a limited time to readers of this magazine. The following products will be available, subject to stock, at lower prices for the period 22 May until 31 June 1993. You can only order directly from HiSoft using your credit/debit card or by sending us a cheque/postal order (payable to HiSoft), quoting reference ATS93M1. All prices include VAT and P&P from HiSoft.

Diamond Edge, Diamond Back II, DataLite Package	£99	ProFlight	£14.95
		Lattice C 5 - non Falcon	£99.95
Speedo GDOS and MultiTOS package	£49.95	HiSoft BASIC 2 - non Falcon	£54.95
		Devpac 3 - non Falcon	£54.95
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